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ORIGINAL LECTURES.

SHAKING PALSY.

A Clinical Lecture delivered at the Good Samaritan Hospital.

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(Reported by JAMES M. FRENCH, M.D.,
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GENTLEMEN: It is pretty plain to see what is the most prominent symptom in this case—tremor; tremor which, as you see, is most visibly marked in the hands. If you make a study of the tremor in this case, you will see that it is rather more marked in the right hand than in the left. You observe that it extends also to the forearms; the arms are also slightly affected. I now call your attention to the fact, and wish to emphasize it, that there is no tremor in the head. The tremor extends also to the lower extremities; you observe that constant agitation of the legs, and perhaps you noticed when he was in bed that the feet were in constant motion too. You observe, again, a peculiar habitus of the body; you notice an inclination of the body forwards and to the left. The head is drawn down upon the body; the chin is depressed, the body is somewhat rolled up upon itself. You see that there is a peculiar expression about the face; the features have a fixed and rigid aspect; there are no changes with the emotions in a face like that. The patient has been in the house about six weeks. He has had this trembling of the hands about five years. He is now 69 years old; the tremor, then, came on at the age of 64. It attacked the left hand first, he tells us, then the right hand about a year later.

We have before us a patient who shows us some very peculiar symptoms, symptoms most marked in the hands, and accompanied by a peculiar deformity of the members affected, to which I shall call your attention a little later. The tremor first appeared in the left hand, then in the right, and then after a little lapse of time, a lapse which the patient scarcely observed, no doubt, it showed itself in the lower extremities. There is a rigid aspect of the face, an immobility of the features, and the patient talks in a monotonous, drawling tone. Now, if I were to ask you to make a diagnosis of this case, I have no doubt that many of you, and those, perhaps, who have had the best opportunity to study nervous diseases, would say that it is a case of disseminated sclerosis; but it is not sclerosis, and I have brought the patient before you to show you the difference between this disease and that. This is a case of what is commonly called "shaking palsy." But by no means every case of tremor in the aged is a shaking palsy, and the disease is not so common as perhaps you would suppose. The mistake in supposing that it is so com-

mon lies in the fact that, with the people, every case of tremor is called shaking palsy.

If we study what is to be seen in this case, you will observe in the first place that the disease attacks an old man; he was 64 when it began. This is a point of great importance, because the organic diseases which are attended with tremor generally attack young people. The most common form of tremor is chorea, St. Vitus's dance. St. Vitus's dance is, in the great majority of cases, a disease of childhood. It does occur in the adult, but such cases are rare. You know it by its bizarre, extravagant, fantastic movements; you know it by the irregular, jerking character of the movements. There is another kind of tremor which attacks extreme old age, the so-called senile tremor, that comes on in individuals most advanced in life, in individuals for the most part between 70 and 80. These are patients who suffer from the muscular atrophy of age, but that is a very different disease from shaking palsy. It distinguishes itself by attacking the muscles of the neck, so that the head and chin are in constant agitation. It is never very severe. It is plain to see that senile tremor is an expression of weakness, of the muscular failures of senescence. It would be a very exceptional case to see tremor of the head in paralysis agitans. Then paralysis agitans comes on earlier, at the age of forty, it may be. Charcot reports a case in which it appeared as early as the sixteenth year. Another case reported was eighteen; but these cases are rare, and for the most part we look upon young cases when reported as errors in diagnosis. For instance, many cases reported as cases of early paralysis agitans are cases of chorea or sclerosis. Ninety-two per cent. of the cases occur between the fortieth and the seventieth years. We see so many cases, however, between forty and fifty, that we cannot look upon it as a disease due simply to age. Senile tremor is due, then, to lack of nutrition in the muscles. This disease, however, is independent of any lack of nutrition.

Well, what is it that causes this disease? The attempt was made to show that, in many cases at least, there was a hereditary influence, but that attempt has not been very successful. It is by no means proven of it at least as clearly as it is of many other neuroses. This disease is purely a neurosis. Still Berger, who has studied this disease lately, thought that there was an element of heredity in many cases. By this we do not mean that the individual is born with the disease, but that the disease will develop in him at the period it showed itself in his parents. Calves are not born with horns, but they develop them later. In about eleven per cent. of the cases of the disease before us, he claims that there can be discovered an hereditary tendency. Nearly all neurotic diseases have a heredity as a prominent factor in their etiology. In epilepsy it amounts to about thirty per cent.

To show you how rare this disease is, I may say that, of 6000 cases of nervous disease observed in the Vienna

Hospital, there were only 37 cases of paralysis agitans. We say, then, that the disease is rare; that it occurs in advanced life; that it is to some extent hereditary. We next observe that it is sometimes due to some mental disturbance, being caused occasionally by excitement of the emotions, as by sudden fright. It is caused by domestic infelicities sometimes in women, and by financial distresses sometimes in men, for it occurs in the one sex about as often as in the other. Then it may occur as a result of getting wet, as a result of cold, we say, when we know not what else to say, and it may occur as a result of trauma. Charcot reports the case of a woman who had an injury to the leg, and in whom a tremor developed in that limb, afterwards extending to the rest of the body.

San Martin reports a case in which an injury of the arm was followed by a tremor which gradually extended to the rest of the body. Then, in a great many cases, we can not find any satisfactory explanation of its cause at all. The disease comes on in some individuals without any apparent cause. Some cases have followed typhoid fever and other infectious diseases, and some cases have followed burns.

It occurs most commonly in the hand, and most frequently in the right hand, but in this case it is most marked in the left. The tremor develops so insidiously that the individual does not notice it until his attention is directed to it by some of his friends. Another distinctive peculiarity of the tremor of this disease is that it does not occur only when he attempts to move. On the contrary, if the individual make an effort he can to a great extent control the tremulous movements for a while. In this case, however, the disease is, as you see, too far advanced for any arrest of tremor. If you tell an individual not so far along to "make a fist," he will generally succeed, and control the movements to a great degree, but, the moment he relaxes the volitional control of the member, the tremor returns. It is, therefore, not a volitional tremor, for it is somewhat, in early cases entirely, under the control of the will.

The disease may manifest itself in a number of ways. It may remain localized to one side of the body, to one arm or to one leg; it may affect the arm and leg of one side only, or it may affect both upper or both lower extremities, producing a kind of paraplegia. Sometimes it crosses, attacking the right arm and the left leg, or the left arm and right leg, but these cases are not common. There is always associated with it a paresis of the muscles; sometimes this paresis exists for several years before the paralysis ensues. Paresis you will readily detect. Put the dynamometer into first one hand and then the other, and you will find that the individual can swing the lever around with one pretty well, but it reaches only part way with the other. You notice, then, weakness and tremor; but you notice another thing, and that is the deformity which supervenes. A man who is familiar with this disease would recognize it in this case, as he walked into the room, without observing the tremor, simply from this peculiar deformity; and in some cases, I ought to say, there is no tremor at all. This is the hand of a man with paralysis agitans. The hands are bent at the metacarpophalangeal joints; it looks something like the deformity of arthritis deformans, but there is here no dislocation, and there are no nodular growths about the

joints. You can see at once that the deformity is only a muscular affection; you can overcome it, but it soon regains its old position. The hand has the habitus of the writer. When a man holds a pen in his fingers the thumb passes under it, the forefinger over it, and the second finger around under it, and this is the position of this hand. It is often when attempting to write that this disease first makes its appearance, the individual writing in undulatory lines instead of following a straight line across the paper, and this is often noticed before the paralysis is observed. Sometimes the individual rolls the fingers as though he were rolling bread-crumbs between them, or beating a drum; but this deformity of the hand is sufficiently characteristic—the flexed metacarpophalangeal joints with the other joints extended. Then we notice great tension of the muscles—"Spannung," the Germans call it. There is a tension of the muscles making the deformity, and a tension of the muscles to overcome it. This is what draws the head down upon the trunk and gives the face such a peculiar expression.

In this individual the tremor does not extend to the muscles of the neck, but I see there is some tremor of the muscles about the chin and some tremor of the tongue. There is generally some tremulousness of the tongue.

There is another point to be observed in this case. When this individual attempts to walk without support he has to walk faster and faster. Nobody ever put that so nicely as Trousseau; he said that the individual has his centre of gravity before him, and he is constantly running after it. You ask the individual to take a step backwards, and he has to go faster and faster; he cannot stop until he falls over. This individual has his body so doubled up that it is thrown out of the line of gravity, and hence he has to walk rapidly in order to maintain his equilibrium. He seeks for some place to put his hands. Hence you may recognize the disease at first in the gait of the individual. You may see it in him when he rises from a chair or sits down. This man, however, is not able to rise or sit down unaided; he has gotten beyond that. In the earlier stages of the disease there is no affection of the inorganic muscles; the sphincters are not affected; but in this case there is some incontinence of urine.

With what disease would you confound it? I have spoken of chorea and of senile tremor. Then there is a mercurial tremor and a saturnine tremor, but in these cases the tremor is generally more universal, and the subjects are generally younger individuals. Then there is the history to aid you. Up to 1867 it was confounded with multiple cerebro-spinal sclerosis. Before that time it was called Parkinson's disease. He showed us how to separate it from chorea; Charcot has shown us how to separate it from multiple cerebro-spinal sclerosis. Sclerosis shows itself first generally in the lower extremities; then the agitation is not pronounced at all until the individual attempts to move himself; a man will have his hands perfectly still until he attempts to feed himself, then he is seized with a tremor. The point of distinction is that in these cases the tremor is volitional. Then, also, in multiple cerebro-spinal sclerosis we do not have this muscular tension, or this peculiar gate, or this peculiar deformity of the face or hands. Then there is no nystagmus in shaking palsy.

We separate the two diseases with a very superficial survey.

These are the only affections with which you are liable to confound the disease, and you see how easy it is to differentiate paralysis agitans. You see it in the fixation of the face, in the bending of the head upon the trunk; no disease closely resembles it, but only distantly simulates it. You will not, however, often see cases in which all the symptoms are so well marked as in this case. Mistakes do sometimes occur, for in post-mortem examinations cases of paralysis agitans, as they were supposed to be, have turned out to be cases of multiple sclerosis. In most cases, however, the lines are so distinct that he can see them who runs.

As a rare feature of this affection, we sometimes see a paresis of the eyes, and there is an inability to read. The eyes, instead of leaving the end of one line when it is read to return to the beginning of the next, will—and this is most pronounced when there are several columns on each page—run across into the adjoining column of the page. There is no lesion of the optic nerve, and no blindness occurs, as in sclerosis. Sclerosis is an organic disease, attended by organic changes in the brain; this disease, however, so far as is known, has no lesion at all. This is a functional disease, as we call it. There is no lesion, no hemorrhage, no hardness, no change in the course of the nerves, no induration, and no softening. We do find all sorts of lesions, softenings, etc., which are commonly found in the brains of old persons, but there is no constant lesion. This is a disease which as yet has no pathology. By that we mean that it is a disease with an anatomy which as yet eludes our investigations. It is a disease which, although it comes to a stand, nobody ever recovers from. Nobody was ever cured of this disease. We can make the individual comfortable to a great extent, and we will try to do that for this old man, but that is all.

I cannot repeat to you all the remedies that have been used in the treatment of these cases. Take your *Materia Medica* and read over the list, for they have all been tried. All the anodynes have been employed; the different preparations of opium, of which codeia seems the best, since it does not constipate. In the advanced cases we find great emaciation occurring. The emaciation is not on account of the disease, but because of the confinement to bed. That is generally the way these patients pass away, that is, by marasmus. Hydrotherapy has been found of no value in this disease. Gentle friction, massage, is of great use; the application of electricity is of use, not in the cure of the disease, but in the alleviation of the constant manifestations of the disease. Arsenic is a remedy which has been of some benefit in increasing the nutrition. Eulenberg has shown us what may be done with it. This man has been taking it for ten days; and when I went in to see him yesterday, after not having seen him for a week, I was surprised at the improvement in his appearance. The proper treatment of a case of this disease is to give him all the exercise he can take. This man must have passive exercise, for he is unable to take any other; he must have frictions, with alcohol or vaseline to prevent abrasions of the skin. Galvanization and faradization of the muscles with a very mild current would do him good. Only a mild current should be used, because a

strong current only exhausts the nervous system and does more harm than good. In this way we may keep the individual comfortable for a long time, for the course of the disease is measured not by years, but by decades. There is nothing to curtail the disease. I brought the patient before you for the purpose of showing you not how to cure it, but how you can always recognize it and differentiate it from any other disease that simulates it. Its marks are very plain. Sometimes you catch it in the voice. This patient draws his words in a monotonous tone. A sclerotic patient often disarticulates his syllables and scans his words. But there is no childish treble in this case. By the way, the childish treble is not due to age, as Shakespeare put it down. You all know very old men. How many of them have the voice that "pipes" in its sound? The childish treble is a manifestation of paralysis agitans, and often appears at the military and magisterial as well as at the age of the slippered pantaloon.

ORIGINAL ARTICLES.

TUBERCULOSIS OF THE UTERUS.¹

By W. J. JONES, M.D.,

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THE purpose of this paper is to call attention to a form of uterine disease, which, though comparatively rare, seems not to have met with that recognition on the part of English and American authors to which it is entitled. Most authors—Thomas, Emmet, Meigs, Playfair, Lusk, Simpson, Cazeaux, Savage, and a few others—do not mention tuberculosis of the uterus at all, and those who do refer to this affection give it but a very slight notice.

Two cases have been seen at Bay View Asylum since May 1, 1884. These two cases, with one other, were kindly turned over to me for publication by my friend, Dr. William T. Councilman.

CASE I.—Fannie G., white, æt. 40 years; nullipara. The autopsy showed advanced tuberculosis of both lungs, tuberculous ulcers in the ilium, miliary tubercles in the liver and spleen and a few in the peritoneum. The uterus was small; flexed toward the left. On its posterior surface and in the fundus, immediately beneath the peritoneum, were two myomata as large as a pea. The uterine cavity was small and contained a small amount of caseous pus. The entire fundus was covered with a superficial ulceration, in which numerous whitish points could be made out. The distal ends of the Fallopian tubes were very much dilated, and, on squeezing them, a thick, grumous, caseous pus was exuded. The left Fallopian tube was very much twisted up and convoluted, the different parts being bound together by old adhesions. Both ovaries were rough and contracted, and of a dense, fibrous consistency. Microscopic examination of the caseous mass contained in the cavity of the uterus and in the Fallopian tubes showed the presence of abundant tubercle bacilli. Sections made through the ulcer in the uterus showed a tuberculous inflammation of the mucous membrane. The mucous membrane was wanting in most places, its place being occupied by a dense, small-celled infil-

¹ Read before the Clinical Society of Baltimore, Oct. 17, 1884.

tration which rapidly underwent caseation. In the cervix uteri there was a small hyaline plug of mucus which also contained bacilli.

CASE II.—Mahala D., colored, æt. 26 years; nullipara. Post-mortem showed advanced tubercular phthisis of the lungs, and miliary tuberculosis of the liver, spleen, and peritoneum. In the peritoneum the tubercles were most numerous in the fold between the uterus and rectum known as Douglas's cul-de-sac. The uterus was small and ulcerated over its entire inner surface. The walls were thin and the cavity somewhat dilated. It contained a quantity of caseous pus. The Fallopian tubes were enlarged, convoluted, and numerous adhesions existed between the convolutions. On section, they were seen to be filled with a dry, tolerably tough, caseous mass. Microscopic examination showed a caseous inflammation in the body of the uterus, with numerous miliary tubercles in the submucous tissues. In the Fallopian tubes the folds of the mucous membrane were involved in the caseation, and for the most part entirely obliterated, so that nothing but a caseous mass filling the entire lumen could be made out. Examination of the pus contained in the cavity of the uterus showed the presence of numerous bacilli. These were also found in the ulcerated surface and in the tubercles in this. In the latter, they were seated principally in the edge of the caseation.

CASE III. is the uterus of a woman, æt. 28 years, who had borne several children. Her last gestation was five months before her death from general tuberculosis. The uterus was of ordinary size, and contained in its fundus a large ulcer covered with a dirty, caseous mass. The ulcerative process here, as in Case I., only involved the superficial layer. The Fallopian tubes were distended, thickened, and filled with firm, caseous material. An examination of the ulcer showed the presence of miliary tubercles in the tissue beneath. Some of these were situated far down in the muscular tissue of the uterus. There was no examination made for the presence of tubercle bacilli.

That two cases should have been found at Bay View in so short a time would seem to indicate that the affection is not so rare as is generally supposed. According to Namias, tuberculosis of the uterus is met with twice in one hundred phthisical patients. Dittrich found one case in forty autopsies on tuberculous women, Peuch met with three cases in one hundred and fifty autopsies, Cless, of Stuttgart, found one in seventy, Courty found two in one hundred, and we have met with two cases at Bay View in five autopsies on tuberculous women.

Of course, one cannot argue in general from so small a number of cases, but still it would seem from this that the affection is not a rare one. According to a table deduced from data furnished by Kiwisch, "Out of 68 cases of uterine tuberculosis which he collected,"

6 subjects were between 10 and 20 years.			
22	"	"	20 " 30 "
15	"	"	30 " 40 "
10	"	"	40 " 50 "
7	"	"	50 " 60 "
6	"	"	60 " 70 "
2	"	"	70 " 80 "

In forty-five cases collected by Dr. Geil, the uterus alone was affected but once. The uterus and tubes, with affection of the peritoneum, was found in 19 cases; without affection of the peritoneum, in 12 cases. The uterus, tubes, and vagina were all affected in three cases. Tubes alone in eight cases. Right tube alone in two cases.

Tuberculosis of the uterus is seldom a primary trouble. Some few cases, however, have been reported in which the uterus was either alone affected, or the process in the uterus was so much more advanced than in the other organs as to make it almost certain that the disease was primary here, and that the other organs were affected secondarily. Most often, though, it is one of the organs last attacked by the tubercular process. It is almost always associated with a tubercular salpingitis, and is secondary to this. In the three cases reported, this is evidently the fact. It is the result of a direct infection of the mucous membrane by the tubercular virus contained in the tubes. Still, we may have cases in which, owing to a general infection of the blood with the virus—*i. e.*, the bacilli—miliary tubercles form, just as in all other organs, from emboli.

Ordinarily, the tuberculosis of the Fallopian tubes follows on a tubercular peritonitis, and the affection of the uterus follows this. Certainly the possibility of infection in still another way cannot be excluded, *viz.*, by coitus. In a case of tuberculosis of the prostate and seminal ducts, it is more than probable that the seminal fluid contains quantities of bacilli; and these, in case they found a suitable nidus in the mucous membrane of the uterus, might produce the disease.

The affection usually takes the form of an ulcerative process, combined with caseation. In the ulcer, miliary tubercles may or may not be found. The uterus contains generally a thick, yellowish-white, caseous mass. A similar mass is found in the Fallopian tubes, and the mucous membrane of these is in about the same condition as that of the uterus. The long, villous-like projections of the mucous membrane into the lumen of the tubes are very soon destroyed, and go to swell the caseous contents.

The seat of the affection in the uterus seems to be almost always in the body. In Case II., the ulcerative process had also affected the cervix, and might have extended into the vagina. Gusserow published, in a dissertation at Berlin, in 1859, several cases in which a tuberculosis of the vagina followed a tuberculosis of the uterus, the pathology of which is about the same as that in the uterus.

The clinical diagnosis of tuberculosis of the uterus can be based upon a persistent leucorrhœal discharge, and other symptoms which would point to uterine troubles; and in any patient of a tuberculous tendency, in which these symptoms are present, we should be led strongly to suspect an involvement of the genital organs.

The diagnosis is often aided by the expulsion of caseous masses from the uterus. The finding of such masses in the discharge as were contained in the uterus of Case II., should make us suspect very strongly the presence of a tuberculous inflammation. We have, however, now at our command one sure

method of recognition, and that is by the presence of the tubercle bacilli in the secretions. In the cases examined at Bay View, large quantities of these were found in the secretions and in the tissues after death, and there is little reason to doubt that they would also have been found during life, had an examination been made.

Siredy and Tomlinson have both shown, by published cases, that the disease is sometimes confined to the uterus and Fallopian tubes. When this is the case, it is of practical advantage for us to recognize it. For the disease may be primary here; and having developed in the uterus, would almost, without doubt, involve the other parts of the organism by travelling the Fallopian tubes and involve the peritoneum, taking a route just the reverse of that ordinarily followed.

In the event of such a case found during life, before the secondary involvement of the surrounding tissues has taken place, a knowledge of how to treat it will present itself for consideration. The authorities which I have examined upon that part of the subject have little or nothing to say. Good hygienic surroundings, tonics, and good food, and perhaps the use of iodoform topically, might at least keep the disease at bay, and thus prolong the patient's life.

NOTES OF A CASE OF HYSTERO-EPILEPSY.

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I. E. C., aged twenty-seven years (but looking somewhat younger), unmarried, a teacher by profession, had been subject to epileptic seizures of varying intensity and frequency for eight years. The paroxysms were at one time diurnal; they were heralded by no distinct aura or premonitory symptoms of any kind, and under appropriate treatment their frequency was considerably diminished; but of late the disease had assumed the nocturnal type and was apparently intractable. That these attacks were genuinely epileptic is assumed, because in every case unconsciousness was present, and the appearance of the patient, the fallow face, the listless expression, and the dull, fishy eye all seemed to indicate the confirmed epileptic. There was apparently no connection between the advent of the epileptic seizures and the periods of menstruation, nor did the patient confess to any dysmenorrhœa or perversion of the latter function; on the other hand, menstruation began in the patient's fourteenth year, and had been always perfectly regular and comparatively painless, and the epileptic attacks did not supervene until her twentieth year. During the two years last past, her intellection, never very acute, had shown signs of impairment under the repeated convulsions, and in May last she had an attack similar in its nature (but of much shorter duration and of much less intensity) to that which is about to be described. Her family history was good, her habits of life quiet and regular, but her digestion was faulty, and she suffered from habitual constipation and hemorrhoids.

During the day preceding the attack, the patient had been peevish and listless, complaining of sore

throat and loss of voice, speaking entirely in a whisper, excepting when angry or forgetful. I am inclined to believe that the sore throat was hysterical, as when I examined her throat with a light and laryngoscope twenty-four hours after the paroxysm, I found no traces even of pharyngitis, although she was still complaining of pain and dryness, and was markedly aphonic. She went to her room at nine o'clock and was asleep at eleven when the rest of the family retired. At half-past three o'clock A.M. they were awakened by her screams and ejaculations, and found her in the condition in which I first saw her, which was at four o'clock (August 6th).

The patient was lying upon her bed, forcibly restrained by several members of the family, her hair disordered and her night-dress torn, and in a wild state of excitement. Her delirium was decidedly religious in its nature, scraps of hymns and verses of the Bible being interspersed with promises to "stand up for the Lord," but inquiry afterwards failed to elicit any cause for religious excitement, and I am of the opinion that the latest subject upon which her thoughts had probably dwelt had given the color to her delirium. She did not respond to any appeals for recognition on the part of the members of the family, but I found that any directions given firmly and decidedly (such as to raise the arms above the head, to cross them upon the breast, to open or close the eyes, etc.) were promptly, but apparently automatically obeyed. After a moment, however, she would relapse into her condition of hysterical delirium. Firm pressure over the ovarian region produced neither amelioration nor any species of modification of the attack, and I may add here that during convalescence I examined the patient thoroughly from head to foot, but failed entirely to develop the hyperæsthetic point described by M. Charcot, either in the ovarian region or along the course of the spinal column. The axillary temperature of the patient taken at a quarter after four o'clock was 103° ; as she became quieter, it rapidly ran down until at eight o'clock it was normal; during the morning, it rose again, and at twelve M. it was 102° . At five o'clock Dr. R. P. Harris saw the patient with me; the temperature was then 101.5° , and the delirium was not so violent, the pulse was rapid and feeble, and she refused her nourishment. We decided to administer nutrient enemata should this condition continue, but at eight o'clock P.M. this was rendered unnecessary by the voluntary imbibition of a pint and a half of milk with a little brandy ($\text{f}\overline{3}\text{j}$) and sugar. At half-past nine o'clock she fell asleep, so continued throughout the night, and the next morning (August 7th) I had the satisfaction of finding her perfectly quiet and rational, though somewhat weak. Her temperature was then normal. At the height of the paroxysm, I obtained a specimen of her urine, which, upon the application of the usual tests, showed the presence of albumen in moderate quantities (as asserted by Hippert in Virchow's *Archiv*, lix. 3 and 4, and quoted by Dr. Hartshorne in his *Essentials Pract. Med.*, p. 306). I was unable to find any tube-casts upon a microscopic examination. The patient, as far as I was able to ascertain, had no rational intervals whatsoever, between the beginning of the par-

oxysms, at half-past three A.M. on the morning of August 6th, until she awoke on the morning of the seventh at half-past six.

The treatment consisted in the administration of moderate doses of bromide of sodium (gr. x) and chloral hydrate (gr. v) every two hours. This was continued until the afternoon of the sixth, when, by the advice of Dr. Harris, the chloral was discontinued. During her sleep nothing was administered, and during convalescence, which was rapid and satisfactory, the quantity and frequency of the doses of the bromide of sodium were considerably diminished. The patient, up to the time of writing (October 24th), has had no return of the disease.

A curious case of hysteria, partaking rather of the nature of catalepsy than epilepsy, occurred in the service of Dr. Morris J. Lewis while I was an interne at the Episcopal Hospital. The notes of the case cannot be found, and I am obliged to give the details from memory.

The patient, aged about thirty-two, was admitted to the female medical ward of the hospital to be treated for dysmenorrhœa. She was short and very anæmic, and her disease was very stubborn. As far as I can remember, her family and personal history presented no points of interest bearing upon the disease. She was the mother of two illegitimate children, and had had one miscarriage. The usual course of treatment was prescribed, and the case presented no unusual characteristics until the fourth day after her admission, when the nurse hurriedly called me to the ward. I found the patient lying perfectly rigid, her eyes and mouth partly open, respiration and pulse normal, but all parts of the body entirely anæsthetic. We endeavored to arouse her by shaking, pinching, pricking with the needle of a hypodermic syringe, but without effect. Pressure over the ovarian region produced no effect whatsoever. The limbs were perfectly rigid and would remain in any position in which they were placed. The paroxysm terminated spontaneously in about fifteen minutes. These seizures recurred every two or three days, but after the first I found I could always speedily terminate them by the application of the interrupted current, one pole over the ovarian region and one at the nucha. The temperature taken at every attack was always nearly normal; the urine examined under every conceivable circumstance gave always negative results. There was no periodicity in the attacks, and a continuous course of nervines produced but little amelioration in the disease. The patient passed out of my hands when I was transferred to the surgical wards, and I have no further account of the case save the record in the hospital books that she was discharged, "improved," in August, 1881, about two months after she was admitted.

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MALARIAL HÆMATURIA, TREATED WITH QUININE HYPODERMATICALLY.

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THE perusal of the history of cases presenting difficult or unique phases should not be devoid of

interest to the profession, and may be of advantage "to a weary brother toiling" with another of the same description.

In the last decade the culture of rice has been extensively introduced into the sugar districts of Louisiana, which has exercised important modifications upon the types of malarial fever. Apropos of rice, I would state that the planters irrigate their fields from the Mississippi River, keeping them covered with water until the month of August, when it is turned off, leaving behind an immense quantity of fish, etc., to putrefy under the summer sun and poison the atmosphere. One result of this is that remittent fever attended with various complications is now generally substituted for intermittent, and the so-called typho-malarial fever is of frequent occurrence.

One of the complications, which is beginning to be quite common in this section, is hæmaturia, and I will give my notes of a case, recently treated, which required a departure from the usual régime:

Mr. A. N. R., aged 37, a native of Louisiana, and by profession manager of a sugar plantation, was taken sick on the 6th of September. I was called to see him on the 8th; found him in the following condition: Temperature $103\frac{1}{2}^{\circ}$ F.; tongue coated; complaining of pain in head and back. I ordered to be taken at once:

R.—Hydrarg. chlorid. mit.

Pulv. jalap. aa 0.5 gramme.

Quin. sulph. 5.0 "

Arom. sulph. ac. q. s.

Aq. aurant. flor. 60.0 grammes.—M.

S.—A teaspoonful every hour, the following morning, until five doses were taken.

Sept. 9.—10 A.M., found patient with temperature of 104° F. and urinating blood; other symptoms same as on previous day. The purgative had produced but one slight evacuation, so I prescribed 15 grammes of mag. sulph. to be taken at once, which gave six operations. The temperature declined to normal at 9 P.M. Ordered 2 grammes of quin. sulph. to be taken next morning.

10th.—8 A.M., temperature 103° F.; urine bloody. Manifests no symptoms of cinchonism. Ordered for the next morning, 3.25 grammes of quin. sulph. Temperature declined about 9.30 P.M.

11th.—9 A.M., temperature $103\frac{1}{2}^{\circ}$ F.; other symptoms unchanged. Gave 0.25 gramme of hydrarg. chlorid. mit. and three drops of tr. acon. rad. every hour, and ordered same quantity of quin. sulph. to be taken the next morning.

12th.—Patient very weak; tongue heavily coated; temperature 103° F. Gave beef tea every two hours. Dr. Schwing was called into consultation that evening, and recommended that the patient be given every hour during the intermission 0.2 gramme each of quin. sulph. et. ferri subcarb., followed by twenty drops of arom. sulph. acid. in water.

13th.—The temperature became elevated, at 8 A.M., to 104° F.; stomach very irritable. Dr. Schwing remained all night with the patient, and administered between 10 and 12 grammes of quin. sulph., by mouth and rectum, during the intermission of six hours.

14th.—Patient very much depressed; temperature

105° F.; more blood passed than on any previous day. The patient expressed the conviction that he was a "gone case," and announced his intention of taking no more medicine, as he wished "to die in peace." I had a solution of quin. sulph. prepared and injected 1 gramme into his arm, with a hypodermatic syringe, at 1, 2, and 3 A.M. on the morning of the 15th.

15th.—9 A.M., temp. 100° F., but rose no higher during the day. Urine has been clear since last injection of quinine. 0.05 centigramme of podophyllin given this morning; milk punch during the day every two hours. At 8 P.M. an enema was given, which produced one movement of the bowels.

16th.—The same quantity of quinine was repeated this morning subcutaneously at the same hours as yesterday. No fever and no blood in urine. A large dose of hydrarg. chlorid. mit. and sod. bicarb. was given, which acted very efficiently.

17th.—1 gramme of quinine was given in the arm this morning, and two doses by mouth.

From this date the patient's convalescence was rapid, and he was able to leave for the seashore in five days. The subsequent treatment consisted of Fowler's solution of arsenic at each meal. No abscesses resulted from the injections of quinine into the arm, and its hypodermatic use undoubtedly saved the patient's life.

October 10, 1884.

HOSPITAL NOTES.

TERRACE BANK HOSPITAL FOR WOMEN, PITTSBURG.

Service of R. S. SUTTON, M.D.

ABDOMINAL SECTION FOR IRREDUCIBLE RETROVERSION OF THE UTERUS WITH DYSMENORRHOEA AND MENTAL DISTURBANCE.

Reported by W. L. STONE, M.D., Assistant.

MRS. S. R., aged 31, a woman of highly nervous temperament, was sent to the hospital by Dr. John P. Sterritt, of Pittsburg. Her married life had been a very uncomfortable one. Temporary fits of insanity took hold of her occasionally, and she would break up the furniture and clean out the house. When her husband exercised his authority she would have him arrested. A number of gentlemen adjudged her insane and made out a commitment for her to Dixmont. She fled, and by some means avoided going to the asylum.

She came into the hands of Dr. Sterritt, who discovered the position of the uterus, recognized its fixidity and suspected that an ovary was also in the very tender mass supposed to be the fundus of the uterus, and that this condition accounted for her mental trouble. He sent her to Dr. Sutton for an examination and opinion. Dr. Sterritt's diagnosis was concurred in, and the patient conveyed to Dr. Sterritt a note saying, "I see nothing but an abdominal section for this case." Her menstrual periods were very painful, and between the periods pain was never absent. Sexual intercourse was always painful and often intolerable. She was admitted to the hospital on the 14th day of September, and the operation was done on the 16th, two days later.

Dr. Sterritt gave the anæsthetic. All precautions to have everything aseptic were taken, there were no spectators, and but one nurse present. Dr. Sutton performed the operation. He made an incision two inches in length and passed in two fingers of his left hand. He could not reach the fundus of the uterus or feel either ovary or tube. He extended the incision to five inches, and passed in his left hand. The uterus was found completely retroverted and fixed, the right ovary and tube were readily found, but the left ovary was not found at this effort. Expecting to need the scissors to aid in freeing the uterus he lifted the intestines out of the abdominal cavity and covered them with a warm wet towel, and I held them together above the wound as much out of his way as possible. He passed in his left hand and succeeded in breaking up the adhesions and pulling the uterus up into an erect position; he now found the left tube leading down to the left ovary still adherent, with his fingers he detached it and at once removed it with the tube, securing the stump by means of the Staffordshire knot. Having gotten the right ovary and tube, he detached the latter from an adhesion to the cæcum and removed both ovary and tube. There was some bleeding in the bottom of the pelvis, and it required considerable sponge packing and time before it was arrested. The uterus was left in position, the intestines were restored to the cavity of the belly, a big flat sponge was spread out over them, and the sutures to close the abdominal wound were introduced. The sponge was then removed. A small sponge was now passed to the bottom of the pelvis behind the uterus and fresh blood was found after several repetitions. A long glass drainage-tube was passed down and secured in the wound as it was closed. After an antiseptic dressing of iodoform and carbolyzed gauze was adjusted the patient was put to bed one hour from the time she began to take the anæsthetic.

On the following morning three and a half ounces of blood were taken from the tube, her pulse was 88, and temperature 99.4°. She had passed a comfortable night. Later in the day the tube was removed. During that night, the second, the nurse was napping, and the patient got out of bed and took a turn about the room. The nurse awakened and put her back to bed. She was probably dreaming, as she seemed astonished to know that he was up. She went along with pulse and temperature in nice condition, but very restless and nervous, and displaying much bad temper and obstinacy until the end of the second week. During the second week she had slight diarrhoea for a day or two. She slept some during the day and deviled the nurse all night, objecting to having the gas turned off, and insisting upon having a supply of waste paper. The latter she chewed into wads which she threw at the nurse when she wanted to keep her awake. At the end of the second week she began to eat well, sleep better, and to sit up in bed. By the end of the third week she was out of bed two hours a day, and on the twenty-sixth day after her operation she returned home in good spirits.

The result of the operation on her mental condition must be determined at a date later than the present, but after a sufficient time has elapsed to test the result, it will be reported.

The left ovary was enlarged and its capsule was torn

in detaching it. The right ovary was very slightly enlarged, possibly it was perfectly healthy; both tubes were congested. The operation was done about one week before an expected menstrual period. Some bloody discharge appeared at the vulva a day or two after the operation. The hot douche was resorted to daily until it disappeared. For many years she was in the habit of chewing snuff, and, in anticipation of a continual need of the article, had secreted somewhere a supply, and on the day after her operation the nurse detected her chewing it. It was taken away from her and she had no more during her stay at the hospital. Of this she complained bitterly, and much of her nervousness may have been due to being deprived of it.

The difficulties of operating in a case like this far exceed those of ovariectomy for cystic ovaries. The cavity of the abdomen is not distended, the bottom of the pelvis is dark, and, indeed, in the smoky atmosphere of this city it is often as dark as midnight in the bottom of the pelvis. The fingers and the sponge alone give information. Dr. Sutton is going to try the introduction, through the abdominal wound, of a small Edison lamp, into the pelvic cavity, the apparatus now in use by dentists. He has no doubt that it will illuminate the cavity with absolute safety, and expose all bleeding vessels and greatly assist in the diagnosis. The results will be communicated.

Since writing the above, Dr. Sutton informs me that he has just seen and examined the patient. Her recovery has been perfect; the uterus is in good position, and her mental condition is decidedly improved.

MEDICAL PROGRESS.

THE USE OF COCAINE IN THE NOSE.—At the meeting of the Boston Society for Medical Improvement, on November 24th, Dr. F. H. HOOPER spoke of the effects of this drug in a case of acute coryza. The left nostril was completely occluded, the right only partially. The sense of smell was absent. On applying a two per cent. solution of the muriate of cocaine to the interior of the nasal cavities by means of a cotton-tipped probe, free respiration was immediately established, the sense of smell returning at the same time. The nose remained perfectly free for three hours, when it began to close up again. This was followed in about an hour by a partial reopening, but at his second visit, five hours after the first application, the left nostril was again absolutely stopped, the conditions, in fact, being the same as at the morning visit. Cocaine was again applied in the same manner, and its use was followed instantly by the same result. Both nostrils have since (two days) remained opened. He had also used it in a case of chronic hypertrophy of the nasal mucous membrane, with the effect of causing a very notable contraction of the swollen tissue. Dr. Bosworth was the first, so far as Dr. Hooper was aware, to call attention to the use of cocaine in the nose. Dr. Bosworth supposes that it produces its effect by causing a tetanic contraction of the muscular fibres which are found surrounding the venous sinuses which form the erectile tissue of the nose.—*Boston Med. and Surg. Journal*, December 18, 1884.

EXTRAUTERINE PREGNANCY IN A TUBO-OVARIAN CYST.—DR. VULLIET, of Geneva, describes, in the *Archiv für Gynäkologie*, Bd. xxii. Hft. 3, a case which he believes to have been of the above kind. There was the history, common in such cases, of previous pelvic inflammation; of the symptoms of pregnancy, milk in the breasts, etc., and the discharge from the vagina of a decidua membrane. There was a tumor behind the uterus, pushing that organ forwards. An incision was made into the tumor per vaginam, but the wall found so thick (in consequence, as was afterwards found, of the implantation of the placenta in the lower part of the cyst) that nothing could be done by this method, and laparotomy was therefore performed; the fetus removed, and drainage-tubes inserted both into the abdominal and vaginal wounds. The fluid contained in the sac was scanty, grayish, and fetid. The patient died on the day after the operation from septic peritonitis. On autopsy the uterus was found enlarged. The left tube and ovary were found adherent to the parietal peritoneum, and a small abscess between the tube and the ligament of the ovary. The gestation cyst was bounded in front by the right broad ligament and the uterus; behind by the rectum and the pelvic wall. The right tube was adherent to the sac, tortuous, and, when opened, was found dilated, thickened, and opening into the gestation sac. No trace of the right ovary could be found, and the most careful examination of the walls of the cyst failed to discover any ovarian structure in them. Nevertheless, from the fact that the ovary could not be found, and that the tube opened into the cyst, Dr. Vulliet endorses the view of Professor Zahn (by whom the cyst was examined) that it was originally a tubo-ovarian cyst; the ovarian tissue being, as is usual in such cysts, spread out over the wall of the cyst, but probably not recognizable in consequence of the secondary changes due to the pregnancy, death of fetus, inflammation of cyst, etc. Dr. Vulliet has found, recorded by Cazeaux, an indubitable instance of pregnancy in a tubo-ovarian cyst. He points out, and shows from cases, that three forms of tubo-ovarian cysts are met with: (1) small and of recent formation, with the ovary unaltered; (2) those in which the ovary is wholly or for the most part converted into a membrane, but retains its proper histological structure; (3) those in which, from tension or other changes, the ovigenous tissue is destroyed.—*Medical Times and Gazette*, December 6, 1884.

THE USE OF ANTIPYRETICS IN FEVER.—At the meeting of the Society of Physicians of Vienna, Dr. JAKSCH read a communication on a new antipyretic remedy. He had made a series of physiological and therapeutic experiments with the "chinolin bases," which had first been synthetically produced by Skraup. In the course of these researches he met with a body which must be looked upon as a secondary chinolin base, namely, "Tetrahydroparachinanisol," which had marked antipyretic properties. All the salts of this base dissolved easily in water, had an acid reaction and were distinguished by forming green salts when treated with ferric chloride or with any oxidizing agent. On account of this quality Skraup and Jaksch called this base Thallin, and the salts derived from it Thallin salts. Dr. Jaksch had tried the efficacy of three of these Thallin salts,

namely, the chloride, the sulphate, and the acetate, as well as another Thallin base, the chloride of aethyl-thallin, in eighty-six various cases of disease attended with fever, as *e. g.*, pneumonia, enteric fever, erysipelas, etc., and he found that these substances had a pronounced antipyretic action when administered in doses of gr. iijss, vijss, and xij.

The speaker remarked that experiments with new antipyretics, kairin, chinolin, etc., had shown that drugs which were only antipyretics were generally of very little use. He, therefore, suggested that further experiments with this drug should be tried on patients on account of its distinct antipyretic character, but he could not in the meanwhile answer the question whether it would obtain a permanent place in the materia medica. It should be remarked that in contrast with kairin, chinolin, and similar drugs, Thallin, when administered internally, caused no disagreeable sensations such as vomiting, cyanosis, collapse, etc., that it only now and then caused perspiration and very seldom gave rise to rigors. The antipyretic effect lasted much longer than that of kairin, and the subsequent increase of temperature developed gradually. Thallin was administered according to the following formula: *R.* Thallin sulph. gr. xxx, divide in doses quatuor, vel. octo. To be taken in wafer paper. Dr. Jaksch had also experimented with another drug, viz., "Parachinanisol" which, according to Skraup was about equivalent to the half molecule of quinine, but the antipyretic effects of this agent were so inconsiderable that he did not think it worthy of further trial. Another derivative of chinolin, viz., the "Tetrahydroparaoxychinolin" with which Jaksch had only experimented on rabbits, proved a strong poison, animals to which doses of from 0.6 to 0.2 grammes (gr. $\frac{1}{4}$ -j) had been given dying in the course of hours with strong tonic convulsions.

PROF. NOTHNAGEL said that he had received the impression, during the last six years or so, that the employment of quinine has become a reflex phenomenon. We have begun to emancipate ourselves from the opinions which were general fifteen or twenty years ago. I would suggest that the fear of a temperature of 102.5° owes its origin to the scientific employment of the antipyretic method introduced by Liebermeister according to the method of Brandt, which in itself is an excellent procedure, and which has added much to our resources. As the treatment by cold baths is attended with some difficulty, and patients have some aversion to it, one began to employ quinine, and since then this drug has been given on a much larger scale than digitalis, nitre and nitrate of soda were employed in earlier times. The two latter have now fallen into disuse and only digitalis is now used as an antipyretic. I cherish the hope and the conviction that this false and erroneous employment of quinine will also in time be discontinued. I need not remark that the way in which quinine is, in most cases, administered, is quite incapable of diminishing temperature. Two, three, or five grains have no effect, nor, indeed, have fifteen grains if taken at intervals of twenty-four hours. Dr. von Jaksch has already remarked that the fever is not a symptom to be removed in every case; the fever, according to my conviction, which is also the conviction of many other investigators, is a most beneficial phenomenon, one of those processes of reaction which we must look upon as

compensatory; we do not, however, know in what way these processes work. With respect to the infectious diseases it has been suggested that the growth of microorganisms is diminished in high temperatures; to me, however, they seem quite on the contrary to find more favorable vital conditions in fever. But attention has been drawn to a new point of view. I refer to the interesting writings of Metschnikoff, who is of opinion that the "Fagocytes" destroy the microorganisms and render them innocuous, and that these processes find more favorable conditions at a high temperature. I would only just mention it on this occasion, as our knowledge in this direction is not at all complete. Moreover, I maintain that we do not shorten the duration of the course of an acute fever, even by a single day when we have succeeded in diminishing the temperature; we even know that there are typhoid processes which run a non-febrile course without any therapeutic treatment, and in which, nevertheless, death occurs. We know of a great many accidents occurring in the course of a febrile disease which do not depend upon the high temperature, but which are due to other conditions. I do not mean to say, however, that we may be indifferent to very high temperatures. A temperature exceeding 104° must be energetically combated, but a temperature of 102.5° does not require such energetic treatment, and the less so in diseases which have a short course. This depends very much on the individual, on the constitutional conditions, and so on, and I only mention it *en passant*. In general we may say that a temperature which does not exceed 104° does not injure the patient. Every one who has had the opportunity of observing a case of recurrent fever knows that it is so. The patient suffering from recurrent fever lies in his bed with a temperature of 104°, 105°, or even 106°, quite untroubled, his sensorium is quite unaffected: when the temperature diminishes, the patient is exhausted, but we do not find that the high fever has done him much harm. To return again to the point from which I started, I maintain that it is an abuse to administer antipyretic agents, especially quinine, in temperatures of 102° and 103°, on the very first day of the treatment, when one has yet no definite idea of the development which the disease-process will take, letting alone the practical point of view, that quinine must rise in price if we employ it in all cases in which bicarbonate of soda, hydrochloric acid, or some similar drug would do as well.—*Med. Times and Gazette*, Dec. 6, 1884.

BENEFITS TO MAN FROM EXPERIMENTS ON ANIMALS.

—Until the results of the researches by Dr. Ferrier on the localization of the functions of the brain were made known to physicians and surgeons, diseased conditions intrenched within the bony cavity of the cranium had been considered beyond the resources of our art. Numerous benefits to practice have followed. Recently, Dr. Macewen, of Glasgow, reports the following case: Hemiplegia developed slowly in a female who had specific history. Vigorous treatment and counter-irritation were tried without benefit. By the advances made in recent years in cerebral localization, Dr. Macewen was enabled to become reasonably certain of the locality of the brain disease. He trephined over the middle of the ascending frontal and parietal convolutions. The internal table was thickened and rough,

A yellow, false membrane covered the dura mater; this was removed. The dura mater was somewhat thickened. An incision was made into the brain, and about two drachms of fluid escaped. The wound was closed, and it healed without the formation of matter. The next day the patient felt very much better. In three days she could move her toes; within a week she could move her fingers and the entire lower limb. In a short time, she was able to walk and do domestic duty in the hospital. Similar improvement took place in her memory and intellect. There is no doubt that the improvement was directly due to the operation. The results in this case point to the possibility that opening the cranial cavity has a much wider field than that occasioned by injuries.—*London Medical Record*, September, 1884.

GASTROSTOMY.—At the meeting of the Birmingham and Midland Counties Branch, Clinical Section, on October 31st, MR. JORDAN LLOYD showed a successful case of gastrostomy, performed on August 12th, for traumatic stricture of the œsophagus. Howse's operation was performed. The patient had quite recovered, was being fed through the stomach-tube, and was gaining flesh.—*British Medical Journal*, Nov. 22, 1884.

ABSINTHE.—At the close of a paper on this subject, DR. FERDINAND ROUX draws the following conclusions:

1. Absinthe obtained by the Duquesnel process is not toxic.
2. Absinthe is a useful drug in chloro-anæmia, convalescence from grave diseases accompanied by alterations of the digestive functions, and in the state of anorexia without lesion of the alimentary canal.
3. Absinthe is especially indicated when more or less obstinate constipation exists with the anorexia.
4. The usual dose should be about gr. jss, taken ten minutes before eating, twice a day, or a one-grain pill may be taken before each meal.—*Bull. Gén. de Thérap.*, November 30, 1884.

THE TREATMENT OF PREGNANCY AND LABOR COMPLICATED BY CANCER OF THE UTERUS.—In an article in the *Zeitschrift für Geburtshülfe und Gynäkologie*, Bd. x. Hft. 1, DR. ALFRED GOERNER relates six cases illustrating the above complication. In one case Cæsarean section, followed by removal of the entire uterus, after the method of Freund, was performed, with the result that the mother died in nine hours. In the second case the cancer was removed during labor with the galvano-caustic wire; and one month after the labor, and again four months after, bits of cancer were scraped away, with much temporary relief; but the patient died ten and a half months after labor. The third case was a most encouraging one. Premature labor was brought on in the thirty-fifth week, and a living child born. On the eighth day after delivery the cancer was removed by the galvano-caustic wire. Two years afterwards no trace of cancer could be found, and two and a half years afterwards the patient was naturally delivered of a healthy child. The fourth case was also very satisfactory in its result. The growth was cut away with scissors, and thus room gained for the passage of the child, which was delivered with forceps, but died from asphyxia. Two days after labor the

cancer was thoroughly destroyed with the thermo-cautery. Two and a half years afterwards Dr. Görner attended her for abortion with a vesicular mole, and found the cervix quite healthy. In the fifth case the growth was removed by cautery wire and cutting instruments during labor, and a living child born, but the mother survived only three months. The sixth case was treated in the same way, and a living child born; but the mother died four and a half months afterwards. These interesting cases, we think, tend to enforce the rule that in pregnancy complicated with cancer the first thing to be done is to remove as much of the cancer as possible; this proceeding being not attended with great risk, and often productive of much benefit.—*Med. Times and Gazette*, Dec. 6, 1884.

BILIARY SALTS IN THE BLOOD OF CHOLERAICS; TOXIC ALKALOID IN THE DEJECTA.—M. G. POUCHET reported, at the meeting of the Académie des Sciences, on November 18th, that in examining the bodies of four choleraics who died in the algid stage, he found, in the blood contained in the heart and large vessels, a considerable quantity of biliary salts. In the urine of patients who had come to the stage of reaction, he also found a large quantity of biliary salts.

In examining the dejecta of cholera patients, he found: 1. That they were almost always of a strong alkaline reaction; 2. That they contained an oily liquid, easily oxidizable and extremely toxic, which, says Pouchet, is certainly a ptomaine.—*Gazette Hebdom.*, Nov. 21, 1884.

THALLIN, THE NEW ANTIPYRETIC.—DR. R. VON JAKSCH states that salicylic acid and its salts are not only febrifuges, but specifics also, whilst the other newly discovered antipyretics are only febrifuges. He has used the Thallin salt in typhoid fever with the result that the temperature fell several degrees in a few hours. The same result was obtained in acute articular rheumatism; it causes a rapid decline of fever and profuse perspiration. It seemed to have no effect upon the real disease; its antipyretic effect was also well seen in several cases of measles, puerperal fever, pneumonia, facial erysipelas, and tuberculosis.

The Thallin salts are, therefore, active antipyretics, and given in doses of gr. iijss, vijss, or xij will lower the temperature and keep it down for several hours.—*Deutsche med. Wochens.*, Dec. 11, 1884.

SUBCARBONATE OF IRON IN SURGERY.—DR. TIMMERMANS calls attention, in the *Journal de Médecine de Bruxelles*, to the use of subcarbonate of iron in the treatment of wounds and ulcers, especially when the latter are chronic. In recent wounds it is a hæmostatic and hastens cicatrization, and rapidly heals ulcers due to excoriations or contusions. The ulcer is washed and dried, its surface and edges covered with a thin layer of the powder, and the whole covered with a pledget of lint or charpie and a bandage. During the first few days the dressing is renewed two or three times a day, according to the amount of discharge. Care should be taken that pus does not accumulate, as the iron should be in direct contact with the ulcer. (Timmermans considers it as efficacious as iodoform.)—*Medical Times and Gazette*, Dec. 11, 1884.

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SATURDAY, JANUARY 3, 1885.

FAREWELL—ALL HAIL!

THE old year has gone, and is irrevocable as the years before the flood. It is marked by important advances in the science of medicine, and has added much to the prophylaxis of disease, while new therapeutic agents or new applications of old are insignificant, unless the recent use of muriate of cocaine prove an exception.

The year has witnessed the death of many of the most illustrious in our profession, chief of whom in our own country was Dr. Samuel D. Gross. They have entered the invisible silence which few can contemplate without awe or reverence, but which so many, weary with life's years and burdens, come to entertain with peaceful hope. We are taught a too often forgotten truth that doctors like all men are mortal; that the best skill, the greatest usefulness, the largest fame cannot avert the shafts of death—cannot evade the great law—dust unto dust, ashes unto ashes.

Success and failure, sunshine and cloud, have been weaving the warp and woof of individual lives. The year brought disappointments to some, while others were made glad by hopes fulfilled; some it overwhelmed with financial reverses, while very few, if any, have escaped inconvenience, if not positive suffering from "hard times"—they have found it difficult or impossible to make outlay and income correspond; so that this new book could not be purchased or a subscription to that medical journal had to be deferred or relinquished, and even in this joyous season of gifts, in the gladdest period of the year when hearts are most open with love and kind-

ness, wife and children could not be so generously remembered.

But what growth in professional skill, and knowledge, and in beauty and strength of moral character, in noble thought and generous feeling has the year brought to each one? It not unseldom happens that the boy home from school for the holidays eagerly measures his height by pencil-mark made on the wall or the door-jamb a year ago, and how he rejoices at the two inches or more that have been added to his stature! Is it not well for us who are children of a larger growth to measure from year to year our increase in moral and intellectual development? Mind may grow, though the body becomes old and feeble, therein giving promise and prophecy that this earthly life is not all.

To some the year brought weary, wasting sickness, and from others it took away loved ones, the light and joy of happy homes, filling the heart with a sorrow unutterable, inconsolable, and inanimate forms once radiant with all grace and beauty were laid in what faith believes is "God's field sown with the seeds of the resurrection."

But farewell to the old year, with its successes and disappointments, its gladness and grief, its crowns and crosses, its laurel and cypress.

Another year comes to wed our life—ours until death do us part, for some the parting will be by individual death, but unto most the year will die. As of old, the Doge of Venice, in official capacity, once a year, with pomp and stately ceremony, wedded the city to the Adriatic, for the sea brought prosperity; so do we wed the year whose hurrying days give us new opportunities for growth and usefulness. We may crown ourselves with rosbuds ere they wither, but let us also crown our lives with good deeds, make the world wiser or better for our living in it, help, each in his own way, each with full zeal and power, in enlarging professional knowledge, in lessening human suffering, and in lengthening human life.

Let us not carry into the new year any strife or animosity, any heart-burning or ill-will from the old, but cast them all into the deep sea of the years that are gone: "Do it straightway while the fateful future is not yet here."

All hail then to the New Year! May it be a happy one to each of our readers.

NEPHRECTOMY.

IN the issue of THE MEDICAL NEWS of last week DR. R. F. WEIR records a case of removal of a suppurating kidney through a lumbar incision, which proved fatal, in ten hours, from collapse. After securing the pedicle a severe venous hemorrhage followed the excision of the organ, which was finally controlled by plugging the wound with sponges, and which was found, post mortem, to have come from a large vein

three-fifths of an inch above the ligated pedicle. He also narrates a recovery after lumbar nephrotomy for an abscess consequent upon laceration of the organ, and states that nephrectomy has been resorted to at least 152 times, with 76 deaths, or a mortality of 50 per cent., although he analyzes only 141 cases, of which 71 proved fatal.

The kidney has been excised for wounds 5 times, with 2 deaths, or a mortality of 40 per cent.; for ureteral fistules 9 times, with 3, not 2, as given by Weir, deaths, or a mortality of 33.3 per cent.; for floating kidney 16 times, with 6 deaths, or a mortality of 37.5 per cent.; for hydronephrosis 21 times, with 12 deaths, or a mortality of 57.14 per cent.; for tumors 32 times, with 22 deaths, or a mortality of 68.75 per cent.; and for suppurative lesions 58 times, with 27 deaths, or a mortality of 46.5 per cent.

It will thus be seen that the best results have followed the extirpation of kidneys not altered by disease, as of 30 examples of the operation for wounds of the organ, mobility, and ureteral fistules, only 11, or 33.66 per cent., perished, which is less by 20.48 per cent. than for hydronephrosis, 35.09 per cent. than for morbid growths, and 12.84 per cent. than for suppurative lesions.

Dr. Weir is of the opinion that only small tumors should be submitted to the operation, or such as can be reached through the loin, since the mortality of the abdominal incision for neoplasms is 80 per cent., as against 28.57 per cent. for the lumbar incision. He also excludes hydronephrosis, since he shows that 16 cases of incision with drainage for this condition have yielded only 2 deaths, or a mortality of 12.5 per cent., as compared with nephrectomy, which furnishes a mortality of 57.14 per cent. Removal of a floating organ is also condemned, its fixation in the loin having afforded only 1 death in 16 cases, a mortality of only 6.25 per cent., while that of nephrectomy is 37.5 per cent. Hence, he concludes that the "principal, if not the sole, condition in a diseased kidney that justifies a nephrectomy is a suppurative process," from whatever cause it may arise, and that the organ should be removed by the lumbar method in the event of the failure of nephrotomy.

Dr. Weir is not singular in the opinion that a suppurating kidney should not be extirpated until after the failure of a preliminary nephrotomy, no matter whether the organ be drained through a posterior incision, as recommended by the majority of operators, or through an abdominal incision, as so successfully practised by Tait. In support of this view may be mentioned the names of Billroth, Tait, Clement Lucas, Rushton Parker, Wheelhouse, and Bryant, whose opinions are recorded, respectively, in the *Wiener medicin. Wochenschrift*, No. 24, 1884, the *Birmingham Medical Review* for July, 1884, and the

British Medical Journal for September 29, 1883, and November 29, 1884.

In further support of this view, as well as of the greater safety of the lumbar incision, we may refer to the statistics of nephrectomy and nephrotomy for suppurative lesions. Thus, of 58 cases of the former operation collated by S. W. Gross, 27, or 46.55 per cent., died. Of the entire number, 16 were examples of laparotomy, of which 10, or 61.5 per cent., perished, while 42 were instances of removal through the loin, of which 17, or 42.8 per cent., died, the percentage of recoveries in favor of the latter procedure being 18.70. Of 37 cases of incision and drainage, on the other hand, examined by the same surgeon, only 7, or 18.91 per cent., perished; and as they include four examples of abdominal nephrotomy, they may very properly be compared with nephrectomy by both methods. Such a comparison shows 27.64 per cent. more of recoveries for nephrotomy; so that we think the rule may be safely established that a suppurating kidney should be cut into and drained in preference to subjecting it to extirpation. In formulating this line of conduct, we do not lose sight of the fact that nephrotomy leaves a permanent fistule in about one-fourth of all cases, which frequently proves to be a source of much annoyance and discomfort. In this event the shrunken sac may then be removed through the loin, as was done with uniform success, in 8 of the 37 cases to which we have referred.

Another and highly important consideration which favors a resort to a preliminary nephrotomy for suppurative lesions, is that it enables us, as pointed out by Czerny, to determine with almost a certainty the condition of the opposite organ. If, after a few days of drainage, no more pus appears in the urine, the probability is that the other kidney is sound. Should the case be one of calculous pyelitis, exploration with a needle through a lumbar incision, or pressing the organ against the psoas muscle, or exploration with the hand inserted into the rectum, or catheterization of the ureters, a device rarely practicable, may solve the problem; but should the supuration be independent of a foreign body, either Czerny's plan, or an exploratory abdominal incision, as advised by Tait and Thornton, will be required to establish the condition of the opposite kidney. Mr. Thornton, indeed, prefers removing all diseased kidneys through the peritoneum, one of his chief reasons being that the other organ can be inspected and felt. Should nephrectomy without preliminary nephrotomy for doubtful suppurative lesions be decided upon, we think, however, that the surgeon will best consult his patient's interests by making an exploratory abdominal incision, when, if it be fitted for it, the wound can be closed and the diseased organ be removed through the loin.

Whenever it is practicable, the lumbar incision is to be preferred to laparotomy. Such, at any rate, is the view held by Czerny, Billroth, Von Bergmann, Lucas, Morris, and others, who have had the most experience with nephrectomy. The largest neoplasms can, of course, only be removed through an abdominal incision, while those of medium size can be reached by an extension of the usual lumbar incision. The ordinary vertical lumbar wound will scarcely suffice for the safe removal of a diseased kidney. Hence, Czerny and Billroth recommend Simon's incision from the border of the quadratus lumborum downwards and forwards to two fingers' breadths above the crest of the ilium, which can be carried as far forwards as may be deemed necessary for the extirpation of large tumors. Weir, in his case, obtained plenty of space by making a transverse cut, from near the top of the ordinary vertical incision, outwards for nearly five inches along the edge of the ribs. In a case of enlarged kidney, containing nine calculi, in which the organ was situated more toward the middle line, Kosinski carried an incision from the space between the eleventh and twelfth ribs, parallel to the fibres of the external oblique, to a point just above the umbilicus. Through such a mixed incision, if the term may be allowed, the operation could be made extraperitoneal or intraperitoneal, according to the requirements of the case.

Of the two abdominal incisions, that of Langenbuch, carried along the outer edge of the rectus muscle, is undoubtedly the best, and is the one preferred by Thornton. It should, however, if it be possible, be reserved for the removal of large tumors, and provision for free drainage should be made by carrying a tube through the loin.

Although we have declared our preference for the lumbar incision, hard and fast rules in regard to methods of operating can as yet not be formulated. Hydronephritic and pyonephritic kidneys should certainly be opened and drained through the loin before resorting to the more severe operation. Whether movable kidneys should be extirpated, or fixed in the loin, is an open question, since we need a much larger experience to determine the value of the latter procedure in relieving suffering. Small neoplasms should be removed through the loin; larger ones through the abdomen. Such are the axioms that we feel disposed to frame from the study of the paper of Dr. Weir, and of the many communications that have appeared upon the subject during the past three years. Be they well founded or not, it is very certain that growing experience tends to restrict more and more the operation of nephrectomy, which, under the best of circumstances, must be regarded as one of the most deadly of all surgery.

UNUSUAL SITUATIONS FOR ECHINOCOCCUS TUMORS.

ALTHOUGH echinococcus tumors are most commonly found in the liver, there would seem to be almost no situation in which they do not occur. In illustration of this, M. GÜNSBURG, of Cracow, Russia, has recently reported in the *Med. Obosrenie*, 1884, No. 6, the case of a woman aged 35, who presented herself at his outdoor service, and who had not menstruated for some months. Neither foetal heart sounds nor placental murmur were audible. She said that nine years previously she had a lung affection, during which, after a paroxysm of coughing, she expectorated a number of white vesicles and membranous shreds. Four months after her first visit Günsburg was sent for, and found her in labor, but delivery of the head was impossible on account of the presence, in the lower segment of the uterus, of a round tumor of fleshy consistence, and as large as the fist. Its upper limit could not, however, be reached by the finger. As the child was dead, Günsburg delivered it with Braun's cranioclast. The woman left her bed in the third week. Twice during the next week, white vesicles and white membranous shreds passed out of the vagina. Shortly afterwards she became ill with cough and dyspnoea, and again expectorated the same vesicles and shreds; which, upon examination, proved to be fragments of echinococcus cysts, presenting the usual stratified layers, although scolices were not found.

More careful investigation of the case revealed the liver much enlarged, extending 4.3 inches below the border of the ribs, while numerous small inequalities on the surface of the liver could be felt through the abdominal walls. Three fingers' breadth below the umbilicus was a second movable and uneven tumor 6 inches long and 4.8 inches broad, and of fleshy consistence. The uterus was enlarged and extended 1.2 inch above the symphysis pubis in the left lateral position. Examination per vaginam revealed a bladder-like swelling with thick fleshy walls. In the thorax, dullness extended much higher than was normal on the right side posteriorly.

Echinococcus tumors of the uterus are exceedingly rare. Only one other case producing difficult labor has been reported, at Isumi, also in Russia. In this instance the woman was also delivered by craniotomy. In addition to this, however, four other cases of echinococcus cysts of the lesser pelvis, in association with the non-pregnant state, are reported in Russian literature. In one case, the tumor, proceeding from the liver, was diagnosticated as an ovarian cyst and operated upon, with a fatal termination. In another case laparotomy was performed and the patient recovered.

A knowledge of the possible occurrence of such cases may serve to prevent errors in diagnosis otherwise unavoidable.

Still another unusual situation for echinococcus cysts is the neck, a case of which is reported in the *Festschrift des ärztlichen Verein*, by Dr. Lindpainter, who was called upon to do tracheotomy in a patient who had noticed enlargement of the left side of the neck from his earliest youth; and in whom more recently a tumor as large as a fist had developed behind the sterno-cleido-mastoid muscle, forcing the trachea out of place and compressing the oesophagus. Dyspnoea resulted, while fluids alone could be swallowed, and that with difficulty. Fluctuation was discovered, and, after a couple of punctures, accompanied by the discharge of a transparent fluid, the trachea straightened itself, and the breathing became easy. Examination of the clear watery fluid revealed numerous hooklets. The cyst was subsequently freely opened and a drainage-tube temporarily inserted. Complete recovery ensued.

THE SIGNIFICANCE OF ALBUMINURIA IN STRANGULATED HERNIA.

WHILE, at first thought, it would appear that the special value of albuminuria as a diagnostic sign must diminish as the number of conditions of which it forms a part is found to increase, closer investigation is gradually proving this to be an error. It is true of this, as of all other conditions, that the more we know of it the more accurate are the deductions we may draw from its presence, although such a state of affairs may be preceded for a time by another in which doubt and uncertainty seem uppermost.

In proof of these statements, we may refer to some recent extended studies by DR. JOSEPH ENGELISCH on "Albuminuria in Strangulated Hernia," published in the *Wiener med. Jahrbücher* for 1884, Hefte 1 and 2. He concludes that, in certain strangulations of the bowel, certain derangements in the renal functions ensue, including albuminuria, and in extreme degrees anuria. In what manner these derangements are produced—whether through scanty water absorption, the loss of liquid by vomiting, irritation of the kidney by the absorbed altered intestinal contents, or by deranged innervation of the intestine—he leaves to future researches, by the aid of chemistry and instruments of precision, but he is inclined to ascribe them to the presence in the blood of absorbed products of decomposition.

The albuminuria thus caused has both a diagnostic and prognostic value. When present, we may infer that a loop of gut is being strangulated, while, if the other symptoms of strangulation are present without albuminuria, we may conclude that it is an appendage of the bowel which is incarcerated, or a portion of the omentum, or that we have an inflamed hernia to deal with. The presence of the albumen also shows that

the strangulation of the bowel has reached a degree which is dangerous to the individual. This is still more certain if there are found in the urine cellular elements derived from the kidney, its pelvis, the bladder, and ureters. The presence of the symptoms of collapse, with sudden increase in the quantity of albumen, announces the supervention of gangrene. The addition to the above of nervous symptoms of a decided character point to uræmia.

As to treatment, where albumen is present, only gentle taxis should be used, and, should this fail, section should be performed, and experience has shown that resection of the bowel, under these circumstances, is often a successful operation.

These are very striking results, and at first thought seem to promise too much. They are, however, easy to refute or confirm. Englisch indeed says of them that they are only a contribution to the symptomatology of strangulated hernia, the exact value of which can only be determined by numerous observations, to which we hope American surgeons will not be slow to contribute.

THE TRANSMUTATION OF BACTERIA.

THE subject of the genetic relations of the different varieties of cleft fungi is admitted on all sides to have a most important bearing upon the question of the germ theory of disease. The relation of the hay bacillus or bacillus subtilis to that of anthrax is a subdivision of this subject which has claimed considerable attention, and at the recent Congress of German Naturalists and Physicians, PRAZMOWSKI read a paper upon it, to the more important points of which Dr. Gaffky calls attention in the *Deutsche med. Wochenschrift*, November 20th.

It will be remembered that Buchner, in 1880, announced that he had, by appropriate cultivation, converted the bacillus of anthrax into the hay bacillus, and *vice versa*, although he himself had said that the mode of germination was different in the two bacilli. Prazmowski has called attention to the fact that the significance of this difference has not been appreciated, while Koch, Gaffky, and Klein have also shown that Buchner's experiments were defective, and the conclusions based thereon not justified. Prazmowski has shown how that, while in the hay bacillus the spores so germinate that the young rods burst forth laterally, that is, vertically to the longitudinal axis of the spore, in the anthrax bacillus they perforate the membrane in the direction of the longitudinal axis, at one of the two ends.

Prazmowski has further demonstrated that it is not true that under certain conditions of cultivation one organism is developed, and under others, another, but that we have to do throughout with two distinct

bacteria, and that the mode of germination of anthrax spores is equally characteristic and unalterable as that of the hay bacillus, and *vice versa*, and that this difference is due to the anatomical structure of the spore-membrane. Still another anatomical difference between the anthrax bacillus and the hay bacillus is found in the fact that the former is unprovided with cilia, while the bacillus subtilis has, as Brefeld has shown, two long cilia at each end. From all of these considerations, Prazmowski concludes that the genetic relation which Buchner sought to establish between the anthrax bacillus and the hay bacillus does not exist.

If these conclusions are confirmed, a most important objection to the acceptance of the germ theory is removed; and we feel bound to state that, in our judgment, the evidence of Koch and Prazmowski outweighs that derived from the apparently less guarded experiments of Buchner, although the latter are supported by Nägeli.

REVIEWS.

ON HEALTH RESORTS.

1. WIESEN AS A HEALTH RESORT IN EARLY PHTHISIS, WITH DIRECTIONS FOR CLOTHING, DIET, AND EXERCISE IN THE SWISS ALPS DURING WINTER. By A. T. TUCKER WISE, M.D., L.R.C.P., M.R.C.S. Formerly Visiting Physician to the Infirmary for Consumption, Physician to the Western General Dispensary, etc. Pp. 68. London: Bailière, Tindall & Co., 1883.
2. THE ALPINE WINTER CURE, WITH NOTES ON DAVOS PLATZ, WIESEN, ST. MORITZ, AND THE MALOJA. By the same Author. Pp. 83. 1884.

THE latter of these little volumes, which is largely a reprint of the former, constitutes a useful guide to invalids driven by pulmonary maladies to Switzerland, and is an important contribution to a solution of the sanitary problem in regard to the value of high altitudes in phthisis. Our author is a strong advocate for the advantages derivable by *poitrinaires* from a dry frosty atmosphere in localities elevated at least five thousand feet above sea-level, and claims that the drawbacks for patients in the first stage of consumption at least, are chiefly due to faulty sanitation of dwellings and their local surroundings. The influence of diminished pressure in producing hæmoptysis might well have been considered more at length, but much valuable advice is given in regard to diet, clothing, exercise, and so forth, at these resorts. It is so customary for British reviewers to triumph over any typographical errors or imperfections in the mechanical execution of works published in this country, that we cannot resist calling their attention to the word "damness" near the bottom of page 13, which, as applied to the climate of Wiesen, affords an evidence either of careless proof-reading or of profanity, which we would be sorry to see displayed in an American book.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 9, 1884.

THE PRESIDENT, ROBERT F. WEIR, M.D.,
IN THE CHAIR.

THE discussion being in order of Dr. Weir's

REMARKS ON EXTIRPATION OF THE KIDNEY

(see THE MEDICAL NEWS, December 27, 1884, p. 707).

DR. HALSTED said that, irrespective of the question of comparative risk, one would admit that neoplasms of the kidney may be more satisfactorily dealt with through the abdominal incision. Certain operators who were complete masters of the technique of abdominal surgery would be justified in preferring and practising laparotomy in the removal of kidney tumors, whereas the great majority of surgeons may prefer, for the present, to confine themselves to the lumbar incision. Each surgeon should, therefore, be the conscientious judge of his own attitude. Thus it is easy to comprehend why von Bergmann, Thornton, Tait and others should adopt the abdominal incision; and, although Tait will not confess the secret of his success, it is quite apparent to others that it is to be ascribed to operative skill and most careful asepticism. Dr. Halsted was inclined to advocate, for the abdominal incision, a line lateral to that recommended by Langenbuch, for two reasons: 1st, to avoid, if possible, subsequent hernia, and 2d, to enable one, early in the operation to sew off the operation field from the general peritoneal cavity. It seemed to him that the suggestion from Hagen-Torn (*Centralbl. für Chirurg.*, No. 35, 1884), to cut through the musc. rectus abdominis rather than through the linea alba to prevent hernia after ovariectomy, was a good one. He advised also that especial attention should be paid to the sewing of the incision through the oblique and transverse abdominal muscles. A cross-cut of such a wound would give two lines, irregularly concavo-convex, demonstrating, that the various tissues divided had retracted unequally, and that to make the cut surfaces offer the broadest possible face, it would be necessary to convert the undulating into plane surfaces. This could be done by one or more rows of buried sutures aimed at the concavities. To enable one to operate outside of the peritoneal cavity, Dr. Halsted recommended a procedure to which he had resorted in his case. The abdominal cavity was entered along Langenbuch's line. In future cases he would enter outside of this line, as just described. In front of the carcinomatous kidney was the descending colon. The parietal peritoneum was a second time divided about three inches from the outer border of the colon and the kidney readily removed. The hemorrhage from the kidney-bed was rather profuse, from, perhaps, about one hundred oozing points. This was only partially controlled by about as many catgut ligatures. The peritoneal cavity was then closed off from the field of operation by uniting the mesial edges of the twice-divided peritoneum. Thus an extra-peritoneal cavity was formed, bounded postero-externally by the kidney-bed and the abdominal parietes which had been

robbed of its peritoneum; antero-externally by the isolated strip of peritoneum, the margins of which were the lateral edges of the original parietal incisions, and internally by the outer surface of the somewhat curtailed peritoneal cavity. The extra-peritoneal cavity was drained (anteriorly) by two large rubber tubes. The hemorrhage stopped at once from intestinal pressure, and convinced the operator that he might have spared himself much trouble and the patient some shock, if, instead of applying so many ligatures, he had earlier closed off the peritoneal cavity as described. The patient recovered rapidly from the shock of the operation and passed a comfortable night. In the morning he developed uræmic convulsions which recurred at intervals until his death, about twenty-seven hours after the operation. He secreted in this time only 3jss of urine. A complete autopsy was not allowed. Injection of the extra-peritoneal cavity demonstrated that the peritoneal cavity had been completely shut off. In the latter was about 3j of slightly stained serum, but no other evidences of peritonitis. Microscopical examination revealed advanced interstitial disease of the right kidney.

Dr. Halsted thought it fair to attribute the convulsions to the condition of the right kidney, for the patient's pulse was too strong to make it probable that diminished blood-pressure alone might have been the cause of the oligouræmia.

FRACTURE OF THE BODY OF THE TWELFTH DORSAL VERTEBRA.

DR. E. L. KEYES presented a specimen of fracture of the spine and dislocation forwards, accompanied by the following history: George H. McM., twenty-eight years of age, by occupation a driver, was admitted to Bellevue Hospital, November 15, 1884. His family history was good. The patient had a chancre six years ago. On November 18, 1884, the patient was standing in front of his horses when they started to run, knocked him down, and the axle of the truck struck him on the back as it was dragged over him. The wheels did not touch him. He was at once paralyzed. The patient was taken to Chamber's Street Hospital, and transferred to Bellevue on the following day, where he was examined and found to have total paralysis of motion below the umbilicus; sensation was not entirely lost, but was much blunted. It persisted for a long time, but could not be referred at all accurately to its proper source. The nature of the sensation was not recognizable. There was complete retention of urine. There was pain on pressure over the spinous process of the twelfth dorsal vertebra. This process was separated by twice the normal interval from that of the eleventh, and seemed to be displaced forward. The patient was placed on a water bed, and the urine was drawn by catheter three times a day.

November 16.—The patient vomited occasionally during the night, and had a burning pain near the left anterior superior iliac spine.

17th.—Considering that the elevation of the displaced spinous process and lamina was the only possible means of relieving the spinal cord from pressure, Dr. Keyes asked his house-surgeon, Dr. Pinkerton, to cut down upon the spine, and remove the depressed bone. A crucial incision was made, the muscles separated from the spinous processes, then pulled aside with

retractors. The articular processes were then felt to be displaced from one another, admitting the index finger between their surfaces, the inferior of the eleventh and the superior of the twelfth dorsal vertebra. It was impossible to make out any fracture of the laminae of the spinous process and laminae of the eleventh, and the spinous process of the tenth dorsal vertebra were removed with the *rougeur*, the latter simply to give room to work in. There was a slit in the dura about one-fourth of an inch in length, which was accidentally increased to three-eighths of an inch by being caught between the forceps and the bone. The spinal cord felt firm and normal. After removal of the bone the cord was entirely free from pressure. The operation was thoroughly antiseptic. A rubber drain was inserted and the wound was dressed antiseptically. Stout zinc splints were applied to the back.

18th.—Temperature 99° to 100° F., and the patient feels a tingling in his feet, but is otherwise perfectly comfortable.

19th.—Examination of the urine showed specific gravity of 1010, albumen and blood. Temperature from 99° to 103° F.

20th.—At 1 P.M. the patient had a chill. The temperature rose to 104.75° F., and the wound was dressed. No pus was found; discharge only slight.

21st.—Temperature continued high. The patient feels badly, but has no pain, no increase of paralysis or of anæsthesia. Incontinence of urine and involuntary evacuations from the bowels continued.

22d.—The patient died at 5 P.M.

Autopsy. The appearance of the wound was healthy. Primary union of the incision. All of the organs normal except the spinal cord. The portion between the tenth and twelfth dorsal vertebrae was very soft. There was meningitis and acute ascending myelitis.

DR. HALSTED referred to a case in which he had trephined the vertebral column for a rotation-luxation forwards of the twelfth dorsal vertebra. The patient, male, aged about fifty, had been so caught between the top of an ascending elevator and a beam as to exaggerate the lower part of his dorsal arch. He was at once brought to Roosevelt Hospital (September, 1884). Examination revealed a depression and loss of spinous process at about dorso-lumbar junction. Just below the depression, on a line with the dorsal spines, was a sharp bony process which Dr. Halsted believed to be the transverse process of the vertebra below the dislocated one. There was complete paralysis of motion and sensation in the lower extremities. The abdominal reflexes seemed to be exaggerated, and all reflexes, superficial and deep, below these were absent. Retention of urine, and, two days later, incontinence of feces. Albumen and casts in urine. On the third day after receipt of injury, operation as follows: An incision in the median line, through badly contused soft parts, was made over lower dorsal and upper lumbar vertebrae. The spine of the dislocated and rotated twelfth dorsal occupied the frontal and sagittal level of the left upper articular process of the first lumbar vertebra. The right transverse process of the first lumbar vertebra, with its fractured tip, was thus driven into the muscles of the loin. Over the spine of the last dorsal vertebra were traces of central nervous matter. The left articular process of the first lumbar and spine of twelfth dorsal

being cut away, a strong Langenbeck's hook was inserted in the laminar fork of the twelfth dorsal. The patient was then doubled ventrally, and at the same moment pressure exerted by the hands of an assistant from behind forwards on the lumbar vertebræ, and traction backwards, by the Langenbeck's hook, of the twelfth dorsal vertebra reduced the displacement with a snap. Reduction of the dislocation was easily maintained. Patient did not, apparently, suffer shock from the operative interference, but died seventeen hours later. One of the internes stated that, shortly after the operation sensation extended almost to the knees. Before the operation, there was no sensation in parts below the distribution of the first lumbar nerve.

Autopsy. Double pleurisy with fracture of seven ribs on the left and of four on the right side. Both lungs œdematous. Fluid in pericardium. Small granular kidneys. Operation wound. Dislocation remains reduced. Comminuted fracture of body of first lumbar vertebra, a small opening into left pleural cavity between eleventh and twelfth ribs. Spinal cord (lumbar enlargement) completely severed and considerable effusion of blood in dural sac in the dorsal region.

DR. SANDS said that in Dr. Keyes's case the persistence of complete paraplegia after the removal of the depressed bone by trephining rendered probable a disorganization of the cord opposite the seat of fracture, which would make any operative procedure unavailing.

DR. HALSTED was quite sure that Brown-Séquard had demonstrated, experimentally, that wounds of the spinal cord may heal and its function be restored. Also that other investigators had observed regeneration, in animals, of excised portions of the spinal cord, and, furthermore, he thought there was clinical evidence sufficient to make it probable that, even if crushed, the cord might regain its function.

DR. STIMSON remarked that the question of trephining for fracture of the spinal column had been discussed for many years. The fact that the pressure which is sought to be relieved is made on the front of the cord by the displaced body of the vertebra, in a region which is not accessible for operation, indicates that the only value which trephining is likely to afford is that observable in Dr. Halsted's case, namely, to afford opportunity for the introduction of an instrument with which to correct the deformity.

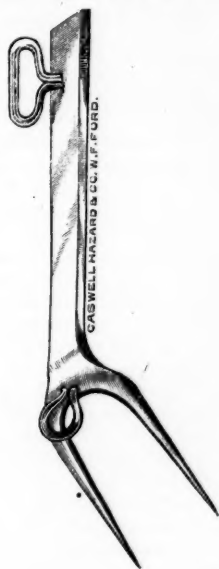
DR. KEYES thought the fact of the existence of acute ascending myelitis, with blood-clot opposite the sixth vertebra, above the point of injury, would have made any other procedure inoperative in this case. The pressure seemed to be relieved at the time of the operation, but probably it was not.

FORK FOR FRACTURE OF THE PATELLA.

DR. L. A. STIMSON showed a fork to be used in the treatment of fracture of the patella. He had expected to show a patient upon whom he had used it with success, but the man had failed to come.

In using Malgaigne's hooks he had found it difficult to insert the hooks deeply enough to adjust the screw that connects them, and he had devised this fork as a substitute. The fork is of iron, two-pronged, the prongs bent in the flat at an angle of forty-five degrees at their junction with the shaft. The prongs are one inch long and three-quarters of an inch apart; the shaft is about

three inches long. There is a small ring at the base of the prongs for the attachment of an india-rubber cord, and another at the end of the shaft for the attachment of a bandage encircling the thigh.



The instrument is used by inserting the prongs through the skin above the patella and pressing them down until they rest against the upper border of the upper fragment; the shaft lies along the median line of the front of the thigh, and is prevented from tilting or moving to either side by a roller bandage wrapped around it and the thigh. Traction downward is made by a piece of India-rubber tubing, one end of which is attached to the ring at the base of the prongs and the other made fast to the front of the skin by adhesive plaster. The introduction of the prongs can be made easily and painlessly by chilling the skin with ice and making two punctures with a knife.

In the case he had treated with this fork the fracture was transverse and the separation about an inch. The separation was readily overcome by the traction. The patient made no complaint during the five weeks the instrument was in place. The patient was kept in bed, with the limb suspended in a wire gutter, and the punctures kept dusted with iodoform; there was no inflammatory reaction about them, and only a slight discharge. The lower fragment was kept gently pressed upward by an oblique turn of a roller bandage. On the removal of the fork, five weeks after the occurrence of the fracture, the fragments were closely and firmly united, without independent mobility. As a precaution, a plaster bandage was then applied, and not removed until the end of the ninth week. The knee could then be flexed nearly to a right angle, and there was still neither independent mobility nor separation of the fragments.

DR. J. L. LITTLE exhibited Haid's electric battery, designed to give electric light to aid in the performance of operations within cavities.

CINCINNATI ACADEMY OF MEDICINE.

Stated Meetings, December 1 and 8, 1884.

THE PRESIDENT, W. H. WENNING, M.D.,
IN THE CHAIR.

(Specially reported for THE MEDICAL NEWS.)

DR. THAD. A. REAMY reported the following

FATAL CASE OF MORPHIA NARCOSIS FROM THE HYPODERMIC ADMINISTRATION OF A QUARTER OF A GRAIN.

Mrs. L., aged 28, a blonde of medium height, light eyes, phlegmatic temperament, large, robust, and well developed, weighing 165 pounds. She menstruated first at the age of 12, married at 20, and at the age of 23 gave birth to a healthy male child. The labor was natural. She never had a miscarriage. Her health and menstruation previous to confinement were both normal. Since her confinement, and during the time that she was under observation, the most important subjective symptom was pain in the pelvic region, constantly present, but exaggerated at the menstrual periods. She had also a constant feeling of languor since her confinement, especially after any exertion, when the localized pain was also increased. Her strength was not in harmony with her development and physique. Physical examination revealed no lesion of heart or lungs. The kidneys were supposed to be sound, in the absence of any symptoms to indicate disease. Examination *per vaginam* revealed a slight laceration of the cervix uteri and of the vaginal portion of the perineum. Some chronic cervical endometritis was also present with the characteristic discharge. In the bottom of the cervical laceration there was a firm cicatricial plug which was supposed to be the cause of the reflected pain.

At twelve o'clock, on the 29th of the month, the patient was operated upon for the cure of these two difficulties. The cervix was operated upon first, and three sutures were inserted for the closure of the lips after they had been denuded. The vagina was then operated upon. The latter operation did not involve the external perineum, but only the vaginal portion, as stated. The two operations together did not occupy more than from twenty-five to thirty minutes. After ten or fifteen minutes had been given for the patient to recover from the anæsthesia, she was taken to her bed. Although the quantity of ether used had not been measured, the time of the operation was so short, and the patient was so easily anæsthetized, that she could not have taken a large quantity. At no time during the operation was she profoundly anæsthetized. There was no stertorous respiration or even momentary stoppage of respiration. Dr. Hiron saw her two or three times after she was placed in bed, and was impressed with the rapidity with which she recovered from the influence of the ether, as well as with her normal respiration and normal, full pulse. Although she complained of pain, it was not of marked severity. A half-hour later, he was summoned to her room and found her suffering severe pain in the perineum in the locality of the sutures, as is commonly felt after such operations, and more especially in patients who are rather obese. She stated, upon inquiry, that she had never taken morphia or opium in any form. She was perfectly rational, conversed freely, and mani-

festated no signs whatever of lingering anæsthesia; but was in excellent condition. Dr. Hiron then administered by hypodermic injection a quarter of a grain of morphia, dissolving the powder in fresh water, adding a ninety-sixth of a grain of atropia. In filling the syringe, a few drops of the solution were lost, so that he remarked that it would probably be necessary to repeat the dose in a few hours. In twenty minutes she ceased to complain of her pain, and for an hour conversed cheerfully with her friends. An hour and a half later, he was summoned to her room, and found the patient in an unconscious condition, so profound that he could not arouse her. Her breathing was difficult and shallow; her pulse was rapid but weak; her skin was cold and moist; the pupils closely contracted, and it was apparent that she was suffering from opium narcosis. Cold water was dashed upon the face, heat was applied to the extremities; the one-ninety-sixth grain of atropia was administered hypodermically, and all the usual methods were applied to resuscitate her. At the same time Dr. Reamy was summoned. When he arrived half an hour later, the patient was in about the condition described. Another dose of one-ninety-sixth of a grain of atropia was administered hypodermically. Coffee was given by enema; ammonia and brandy were repeatedly administered subcutaneously; mustard was applied to the chest and abdomen, and every effort was made by heat and frictions to the extremities, flagellations, etc., to arouse consciousness, but without success. The faradic current was applied, one pole being placed over the region of the phrenic and pneumogastric nerves, the other over the diaphragm. This for a time seemed to improve the breathing and the pulsations of the heart, but only for a time. Artificial respiration was now resorted to and persisted in until the heart had ceased to beat. As the pupils had not responded to the atropia already administered, another dose of the $\frac{1}{180}$ th of a grain was given. All remedies failed, however, and death occurred eight and a half hours after the first administration of morphia, supervening upon a state of profound coma, the action of the heart becoming gradually more feeble, the breathing constantly becoming slower, until it amounted to only four or five respirations per minute.

Dr. S. NICKLES remarked that, while very serious symptoms have been known to follow the administration of even less than a quarter of a grain of morphia, the case just reported was the first, so far as he was aware, in which the death of a healthy adult resulted from so small a dose. According to Husemann (*Die Pflanzenstoffe*, 2d edition, 1884), the smallest dose which has caused death was one grain. This had been given to a girl, aged nineteen years, in divided doses, within six hours. Death resulted in thirteen hours. Husemann also refers to a case, reported by Taylor, in which half a grain was supposed to have destroyed an unhealthy patient, but considers it a doubtful case. Not infrequently, after hypodermic injection of small doses, there takes place sudden prostration, with marked giddiness and very difficult breathing. From the rapidity of action, it is inferred that the medicine was thrown into a blood-vessel, for it is now well established that such effects take place in a few seconds after intravenous injections.

The case reported by Professor Reamy was a doubt-

ful one. The patient died eight hours after the subcutaneous injection of a quarter grain of morphia with such symptoms as are usually produced by large or toxic doses. Administered subcutaneously, morphia produces its characteristic action upon the cerebrum in from five to twenty minutes. But in the case reported the narcotism did not take place before the lapse of an hour. Then the patient became comatose, the pupils contracted strongly, the respiratory movements became slow and shallow, and the pulse rapid and feeble. Notwithstanding the use of the various means usually resorted to in morphia poisoning, the patient succumbed in about eight hours. No post-mortem examination was made, and hence, to say the least, the case is a very doubtful one. It is not unlikely that a post-mortem examination would have revealed a cerebral hemorrhage.

However, if the case be considered one of medicinal poisoning, by so small a dose as a quarter of a grain of morphia, it will show that such a dose, administered subcutaneously to a patient unaccustomed to the action of morphia, is not a safe one. Some authors insist that the first hypodermatic dose shall not exceed one-sixth of a grain.

The case is certainly a remarkable one, in so far as death resulted, notwithstanding that the patient, a healthy, strong woman, was seen soon after narcosis began, and was at once placed under treatment. At no time did the measures employed diminish the coma, increase the respirations, augment the force of the pulse, or otherwise alter the symptoms which were supposed to be due to the quarter grain of morphia. This negative result of the prolonged efforts to save the patient is sufficient to justify the opinion that there was present some other cause of the coma. Usually, in poisoning by lethal doses of morphia or opium, the antidotal and antagonistic treatment, for a time at least, produces very obvious amelioration of the symptoms. And when these measures are efficiently employed, they usually rapidly improve the symptoms and save the life, even when many times the lethal dose has been given.

Morphia and opium poisoning being so frequent, the speaker thought it proper to make a few remarks on the treatment. Generally the poison is taken *per os*. In such cases the first indication is the removal of the contents of the stomach. Morphia is slowly absorbed, and, even after the lapse of hours, sufficient may remain in the stomach to destroy the patient. If the patient be seen early, before coma has taken place, means to excite vomiting are proper. Irritant emetics, especially sulphate of zinc and sulphate of copper, may be employed. But these emetics should be used in the ordinary doses, and not in quantities of half a drachm, as recommended by some authors. If the stomach is insusceptible to the action of several ten-grain doses of sulphate of zinc, larger doses will prove equally inactive. Absorption of the salt will occur, and the depressing effect of the morphia will be increased. Even when the stomach is not benumbed by a narcotic, moderate doses of sulphate of zinc more certainly produce the emetic effect than large doses. Toulmouche observed that doses of from six to twelve grains constantly cause vomiting, while doses of fifteen grains or more constantly failed to have this effect, while they generally produced purging. The vomiting pro-

cess may be hastened by titillation of the fauces and the administration of large quantities of tepid water. As an antidote, tannic acid should be given; it will render the morphia less soluble, or, if the latter be in solution, will form with it a salt which is less readily absorbed. From twenty to forty grains of tannin will usually suffice.

Partly as an antidote, and partly as an antagonist, strong infusion of coffee should be given. Its tannic acid will retard the absorption of the morphia, while its active principle—the caffeine—will antagonize the general action of the poison by stimulating respiration, augmenting circulation, and elevating the temperature. If the patient be comatose, vomiting cannot be induced. Then the stomach-pump should be employed to evacuate the contents of the stomach. Instead of water, it will be prudent to employ an infusion of coffee to wash out the stomach.

The second indication when the poison was ingested, and the only one when it was thrown into the subcutaneous tissue, is stimulation of the central nervous system, especially the respiratory centre. Various measures are recommended, as flagellation, friction of the surface, ambulation, painful applications of the faradic current, and douches of cold water. When the patient has not yet become comatose, these measures are often useful, but usually completely fail, after profound coma and great prostration have taken place. Liebermeister reported a case of severe morphia poisoning in which the douche of cold water, applied at intervals of ten or fifteen minutes for six hours, proved successful. At the same time, however, the patient was kept in a warm bath. Perhaps the latter measure had much to do with the recovery, for heat is a powerful stimulant of the respiratory centre and the heart. During profound morphia narcosis the temperature of the body falls several degrees. Hence, the patient's room should be kept warm, the patient should be covered with warm blankets, and bottles containing warm water or heated bricks should be applied to his extremities. Frequently all these measures fail to increase the respiratory process and the heart's action. Then recourse must be had to the most powerful means of stimulating these functions—namely, artificial respiration and subcutaneous injections of atropine.

Various methods of practising artificial respiration have been recommended. Schüller succeeded in two cases with the following simple method: Applying his hands along the thorax, from above downward, he grasped the right and left borders of the chest and forcibly drew the ribs outward and upward, and then quickly pressed them back towards the abdominal cavity. These movements were repeated rhythmically, so as to correspond to the normal respiratory movements. An assistant at the same time maintained complete flexion of the thighs in order to relax the abdominal parietes. In order to restore the normal frequency of the respirations, the faradic current has been strongly recommended. The electrodes are applied in such a manner as to cause the current to pass through the phrenic nerve—first on one side, and, after an interval, on the other. This may be accomplished by firmly applying one electrode just behind and below the middle of the posterior border of the sterno-cleido-mastoid muscle, and the other electrode in the supra-

clavicular space. As soon as the diaphragm has contracted, one of the electrodes should be removed, and the abdominal surface should be compressed in order to promote expiration. After a few seconds the current should again be applied, and this be followed by abdominal compression. The application of the current should be repeated about fifteen times in a minute.

Recourse should also be had to atropine. Its utility consists not in a complete antagonism to morphia, but in an antagonistic action of the respiratory centre and heart. Hence the condition of the respiratory and circulatory functions is the index to the use of atropine. Abnormal slowness of the respiratory process and feebleness of the pulse indicate its use. According to the reports of good observers (Johnson, Binz, Robert, Fothergill), soon after the hypodermatic injection of atropine, the respirations become accelerated and the pulse stronger. How much atropine should be injected? Evidently this will depend on the condition of the functions to be excited, and the effect of the first moderate dose. Some authors recommend the small dose of the fortieth of a grain. If the respirations should become increased in frequency, a few repetitions of this dose may suffice; but should no effect have taken place in ten or fifteen minutes, the next dose should be larger—say one-twentieth or even one-tenth of a grain. Johnson, who had perhaps greater experience in the treatment of opium poisoning than any other physician, having treated more than three hundred cases, employed large doses, from one-third to one-half of a grain. According to him, the cold douche, artificial respiration, the application of electricity, and all kinds of stimulation are usually of no utility, while the administration of atropine is speedily followed by wonderful effects, the pulse becoming stronger, the respirations more rapid and tranquil, and the coma a peaceful slumber, from which in a few hours the patient awakens fully conscious.

DR. P. ZENNER remarked that it seemed to him that atropia had been rather too freely administered, since atropia antagonizes the action of morphia on the heart, as well as on the respiration, and in this case the heart's action was too rapid, instead of too slow. Was it not possible, then, that the atropia only exaggerated the injury already done to the heart? In regard to the application of electricity in cases of this character, he had no faith in the efficiency of the remedy further than the action it had in stimulating the peripheral centres, and through them acting on the circulation, the impulse being finally carried to the heart. He thought that the best method was to apply a strong current to the skin by means of the electric brush.

DR. J. T. WHITTAKER, in renewing the discussion, said that the Academy was to be congratulated in having received so faithful a report of a case that had turned out so unfavorably. He also congratulated the reporters of the case for having had the courage to present a report of this kind. If all the cases of mysterious death were reported to medical bodies, the profession would be benefited rather than suffer.

The most powerful weapon that we have, the "*magnum donum Dei*," has been assailed in this case. We might feel the consternation of soldiers who learned that their chief weapons were dangerous to themselves. When a case of this kind occurs, we want to be entirely

sure of the accuracy of the reported facts; exactly how much morphia was given, how it was given, under what circumstances. We must question the competency and the credibility of the witnesses. In this case he was personally acquainted with the physician who administered the drug, and he knew him to be perfectly competent and trustworthy, inasmuch as he had been for a year his assistant at the hospital. The physician administered the morphia from a powder of known quantity, freshly dissolved in a spoon—a practice which it is probable he had learned from the speaker, for that is the method he employs and teaches. The atropia must necessarily have been added from a solution to the powder. The speaker expressed a desire to know how the powder appeared to the physician as he dissolved it, whether it appeared large or small; whether it was in crystal or in fine powder, for a given quantity pulverized appears not more than a quarter or a sixth as large as the same quantity in crystals. A mistake might have been made in this way, for we are all familiar with the manner in which druggists divide their powders. It is stated in this case, on the authority of several witnesses, that the druggist was cautious and careful. The question next arises, Did the accident occur on account of the morphia alone, or were there other agencies that influenced the result? We must consider, first, the operation; second, the ether; third, the atropia; fourth, the possibility of compression from cerebral hemorrhage, and, fifth, the possibility of the formation of a thrombus. All these questions would have to be discussed if the case were brought up before a court of justice.

The operation was a trivial one, and the patient appeared to recover perfectly. She recovered properly also from the ether. Had the anæsthetic used been chloroform, we would have had to consider the possibility of a collapse even some time after recovery, but with ether this is not the case. It would be barely possible to have such a result from ether.

The ninety-sixth of a grain of atropia could not possibly have done fatal harm. The smallest dose of this drug that the speaker knew of having caused a fatal result was two grains. There remained only the question of apoplexy, thrombus, and morphia. The patient was too young for cerebral hemorrhage, and she had no heart disease to account for an embolus. Very vague ideas, he said, prevail regarding the formation of a clot, a thrombus. It appears to be generally believed that all that is necessary to the formation of a clot is to have the circulation stopped. That is not true. Blood coagulates in a vessel in which the endothelial covering of the internal coat of the vessel has been broken up or diseased in some way. There is nothing that so quickly causes disease of the endothelium as septic poison. There was, however, nothing in the case under discussion that could have produced an injury of the endothelium. There was no infectious process. There was no inanition, no marasmus to have impaired the vitality of the endothelium. Moreover, the signs of morphia poisoning were present in the individual. The pupils were contracted; the face was suffused and cyanotic. As stated by a previous speaker, morphia kills by attacking the respiratory centres of the brain; when an individual dies by morphia, he dies asphyxiated. There was the additional fact in this case that the res-

pirations were reduced to six per minute, though the rapidity of the heart was increased, contrary to the rule. He differed from one of the previous speakers in his statement that morphia has no action upon the heart. According to the experiments of Witkovski, toxic doses diminish very decidedly the frequency of the heart. There were formerly different opinions expressed in regard to its action on the eye. In the celebrated Castaign case, Orfila declared that morphia always contracted the pupils, while Chaussier maintained that it sometimes dilates them. Now, however, we know that it at first contracts them, and that as soon as the stage of asphyxia comes on, the pupils often dilate. Mistakes have been made by physicians who saw cases only after some time, and observed only the dilated condition of the pupils.

In regard to the amount of morphine that will produce a fatal result, the speaker said that Taylor, in his *Jurisprudence*, reports that five cases are on record in which death was produced by a single grain; but a large number of cases have been reported in which the equivalent of less than one grain has caused death. A drachm of the tincture of opium is the smallest amount of this preparation that has produced death in the adult.

Opium poisoning is the most common of all. In England, from 1837 and 1838, there were 527 cases of poisoning, and, of these, 198 were by opiates, while of arsenic there were but 185. Guy, in his report for 1852-56, says that half the cases of poisoning in these years in England were from opiates.

Galtier reports eighty-three fatal cases of poisoning in New York in 1880-83, of which thirty-nine were by opium. In recent years opium poisonings continue to increase.

It is more important for us to know that the great majority of the cases of opium poisoning are not the result of intention—that is, suicidal—but are accidental medical cases.

In all cases it is necessary to consider the question of age, of habit, of circumstances and condition. The question of age could not enter in this case; we need the question of habit be considered. The danger of opium in early life has been thoroughly discussed. The most significant fact is the statement made by Guy that over two-thirds of the fatal cases are children under the age of five. This patient had no opium habit. The tolerance to opium is something wonderful, but the opiophages constitute a respectable contingent of the fatal cases. They resume it in large doses after having ceased to take it for a time, and fall easy victims to its toxic effects.

Husemann reports the case of a woman with cancer who took twenty grains a day; Credé a case in which fifty-two grains was the daily dose. Albin Eder's preacher took at least forty-five grains of morphia a day. Otis reports a patient who injected, hypodermatically at a single dose, sixteen grains; Burkhardt a case in which thirty grains were injected; and the speaker had a patient who used hypodermatically twelve grains at a time, usually repeating the dose three times daily. It is not infrequently that accidents supervene in these cases, for the individual having, to a great extent, broken off the habit, or reduced the quantity, returns to it, and is unable to endure the larger dose.

He agreed with a former speaker in his statement that morphia has the same effect whether taken hypodermatically or by the stomach. The only difference is in regard to time. Husemann states decidedly that there is no proof that morphia acts any more powerfully hypodermatically than by the stomach, but that it is only more prompt. If all the morphia be absorbed from the stomach, the effect is the same. As a rule, it is all absorbed, and the same effect is soon produced as when taken by the stomach.

On the other hand, there are individuals who cannot take opium at all without danger. In other words, there is an opium idiosyncrasy. We know that some people require twice as much as others to produce sleep under the same circumstances.

In regard to this inability of some persons to take morphia, he referred to the case of deep narcosis reported by Christison after seven drops of the tincture, and related a case that he had himself seen, with another member of the Academy, in which, after the administration of a half grain of morphia in two doses, they were compelled to watch the patient for twenty-four hours; and a case in his own practice in which he had administered five grains of Dover's powder, notwithstanding the protestations of the patient, because he did not credit her statements, and he was compelled to watch with her all night. Viber had a case that was poisoned by two milligrammes—about the thirtieth of a grain. Fortunately, he remarked, such cases are so extremely rare, that the accuracy of the statement is always questioned.

Referring to the statement that the patient did not exhibit signs of intoxication until an hour and a half after the dose had been administered, he said that there was nothing remarkable in the fact. It is not at all uncommon for the remedy to act in this manner.

Christison reports a case in which ten hours intervened between the ingestion of an ounce and a half of laudanum and the narcotic effects. Taylor mentions a case of interval of three hours, during which time the individual walked the room, and another case of an individual who, after taking half an ounce, talked two hours with a neighbor before the toxic effects supervened. Moore's patient walked about one hour and a half after the enormous dose of seventy-five grains of morphia. More numerous and more dangerous are the so-called cases of secondary asphyxia, in which the patients recover, and die in twenty-four to forty-eight hours of a relapse. Such phenomena are explained upon the assumption that the remedy is not at all or not all absorbed for some time.

In conclusion, he stated his belief that the case reported had been a clear case of morphia poisoning, and, as for the treatment, he thought all had been done that was justifiable, unless it had been a bolder use of atropia.

Were he called upon to treat a case of poisoning by the hypodermic use of morphia, he thought that he would give not less than a tenth of a grain, and, if this did not have the desired effect, he would repeat it until a half or even a grain had been given. All the measures used are with a view to stimulate the respiratory centres until the morphia is let loose from its combination with the protoplasm of the nerve cells. Crecy had a good result in one case from the inhalation of

oxygen, a treatment in scientific accord with the indication in a case. Unfortunately, the treatment is not practicable in most cases, and we must reply upon coffee, flagellation, faradization, artificial respiration, and atropia.

DR. P. S. CONNER remarked that the case under consideration was of more interest to surgeons than to those engaged in medical practice, for morphia is the strongest support of the surgeon. He would feel exceedingly sorry if the report of a single case or any number of cases of death from so small a dose should lessen the confidence that we have in the remedy. He agreed perfectly with the last speaker in attributing the death to an idiosyncrasy. The patient was not able to tolerate an ordinary dose. The question of idiosyncrasy is an exceedingly interesting one. Every one has peculiarities at one time that he has not at another. This is true not only of opium, but of very many other drugs. Vincent, of Lyons, has recently reported experiments upon animals, in which drugs were administered by intravenous injection, and the most varied idiosyncrasies were observed. The most extraordinary differences were observed in different animals under the same conditions, and in the same animal at different times. The speaker referred to the enormous doses that are sometimes tolerated by individuals who are not accustomed to the use of opium, and instanced the case of an army associate whom he knew not to be accustomed to it, and yet took five grains of morphine with no effect more than to secure him a night's relief from severe pain.

That death should result from so small a dose he considered remarkable, but he thought that such a case should not influence our faith in the use of the remedy. In regard to the use of atropia, he thought that it might have been more freely administered, because it is generally so well borne. He remembered a case in which he had given an eighth of a grain to an individual in three doses, and where it was very difficult to satisfy the "intelligent" jury who sat on the case that the death was the result of hydrophobia, and not the result of atropia. So, while it was very easy to look back and say that a larger amount might have been given, it would have been much more difficult to determine the question at the bedside of the patient; and he had no doubt that if a grain, or even half a grain, had been administered, there would have been more than one ready to attribute the death to the atropia instead of to the morphia, and it would have been said more than once that the individual would have gotten well easily enough had not the atropia been given.

In regard to the use of electricity, he said that nearly every report that one reads of a patient being overcome by chloroform or any of the narcotics, states that the battery had been used to stimulate the pneumogastric. In his opinion, nothing worse could be done: since the pneumogastric was the inhibitory nerve of the heart, and its stimulation would only add to the existing trouble. He agreed with a previous speaker who thought that electricity was of service by its stimulation of the skin. It was all the more surprising that so small a dose of morphine should result fatally after an operation, for it is a well-known fact that individuals who have been the subjects of operations generally bear morphia better than those who have not been operated upon. It is customary to give not a quarter of a grain,

but a third, a half, or even a full grain after an operation; such had been his practice, and he had never had any evil result from it. This individual was unfortunate in that she had an idiosyncrasy; and the reporter might, changing the words of Paré, say, "I dressed her, and God (not cured, but) killed her."

DR. S. NICKLES stated that nearly all authors who discuss the measures appropriate in morphia poisoning recommend the application of electricity to increase the frequency of respiration. They do not, however, direct that the current shall be passed through the pneumogastric nerve, which would retard the heart's action, but only through the phrenic. The question of importance to us is, Will the electric current properly applied increase the depth and frequency of the respirations? for this is the most important indication in all cases of morphia poisoning. That the faradic current passed through the phrenic nerves in persons whose respiration is failing from narcotic poisoning, will cause very active contraction of the diaphragm has been repeatedly observed. A case treated by the speaker a short time ago demonstrated the power of electricity. The patient was found in profound coma, with slow stertorous breathing, and cold, moist, cyanotic skin. After a prolonged spree, he had taken bromide of potassium, chloral, chloroform, and morphia. The faradic current was passed through the phrenic nerve, and produced deep inspirations. The respirations were thus maintained at fourteen in the minute for several hours.

In Dr. Reamy's case, no such effects were obtained. This, as well as the supervention of the coma, renders the case a very doubtful one. Cases of supposed opium poisoning had been reported, the patients having taken lethal doses of the narcotic, in which post-mortem examination revealed cerebral hemorrhage. Johnson had reported several cases. He did not believe that in a healthy adult between the ages of twenty and fifty years there could exist so strong an idiosyncrasy that a quarter of a grain would produce death. The smallest dose of opium known to have destroyed an adult was four grains. The best opium may contain as much as twenty per cent. of morphia, and three grains may be considered equivalent in therapeutic activity to one grain of morphia. Opium, however, contains besides morphia a large number of alkaloids, although in smaller quantity.

He said that no antagonism exists in the action of morphia and atropia on the pupil. When atropia is instilled into the eye, rapid dilatation of the pupil ensues; a similar application of morphia produces no effect. In the one case the remedy, atropia, acts upon the peripheral part of the oculo-motor nerve; in the other, no action whatever takes place. How morphia produces myosis is still unknown, except that it is due to a central influence. The fact alluded to by a previous speaker that atropine will dilate the pupil contracted by morphine proves nothing, since morphine applied locally will not contract the pupil dilated by atropine.

A previous speaker referred to the experiments of Witkovski, as proving that therapeutic doses of morphia do affect the heart's action. The experiments of Witkovski were performed on animals. The action of morphia on different species of animals differs widely; it differs still more between man and all species of animals. Hence, no conclusions can be drawn, as to

the action of morphia upon man, from the effects observed in animals. But Witkovski did not conclude that morphia markedly affects the circulation. On the contrary, in the summary of the results (*vide Archiv f. exp. Pharm. und Path.* Bd. vii. p. 268), he says: "The centres of the inhibitory vagus fibres of the vaso-motor nerves, and the contraction of the pupil, are not directly influenced by morphia, either in the form of paralysis or excitation," and "the heart itself is not influenced."

Experiments of real value were performed on healthy men by Riegel and Priesendorfer. They administered from a sixth to a half grain of morphia to healthy adults. In no instance did they notice any variation in the force or frequency of the heart's action, and hence they conclude that "morphia, in doses of from one to three decigrammes (one-sixth to one-half grain), exerts no action upon the vascular system of man."

Toxic doses, on the contrary, do affect the circulation, the pulse becoming feeble, slow, and irregular. The slowing of the heart's action is attributed to the excitation of the inhibitory nerve of the heart. But the slowing persists when the inhibitory centre has become paralyzed, in consequence, it is supposed, of paralysis of the musculo-motor ganglia of the heart.

The action of morphia, introduced hypodermically, differs from the action by the stomach chiefly in quantity and rapidity, not in quality. It is quickly absorbed by the subcutaneous lymphatics, and hence acts in a few minutes. But from the stomach, absorption takes place slowly, and often incompletely. Morphia has been detected in the human stomach fifteen hours after the administration of small doses. It has been discovered in the small intestine of the cat from fifteen to eighteen hours after administration. Sometimes, after the therapeutic use of morphia, it is not completely absorbed, since small quantities have been detected in the feces.

Morphia is not rapidly eliminated, from ten to twenty hours elapsing before it, or the products of its oxidation, have entirely disappeared from the urine.

That morphia diminishes the secretions, is usually held. But there is no positive proof that it directly diminishes any secretions, except those of the mouth and trachea. After very minute doses, the salivary secretion may increase, but the mouth becomes dry after large doses. Rossbach found, in experiments on animals, that the secretion of the trachea is rapidly diminished. It is often asserted that the secretions of the stomach, intestines, and liver are diminished. This is inferred from the anorexia, indigestion, and constipation resulting from large doses, and often from small ones. Rutherford, in his experiments, could detect, after the use of morphia, no difference in the quantity of bile secreted. The constipation has been shown by Nothnagel to be produced by arrest of peristalsis, in consequence of excitation of the inhibitory fibres of the splanchnic nerves. The difficult micturition is ascribable to modification of the innervation of the urinary bladder, not to changes in the quantity of urine. The secretion of the skin usually becomes increased; and when this occurs to a marked degree, the urinary secretion becomes lessened indirectly. Toxic doses of morphia, which greatly reduce the blood-pressure, will rapidly diminish all the secretions, because these

cannot take place when the blood-supply is insufficient.

DR. REAMY, in concluding the discussion, said that the most striking point in the case was the first startling announcement that the woman had suffered the symptoms stated from the exceedingly small dose of a quarter of a grain.

The woman was perfectly healthy, so far as the most careful examination could determine. She had willingly submitted herself to an operation that could not be considered absolutely necessary; notwithstanding, he regarded it as warranted for the relief which would follow. He had assured her that there was no danger in the operation itself. She was young and of high social connection, and the mother of one child.

When he saw the case, it was after the second administration of a ninety-sixth of a grain of atropia, including the amount first given with the morphia. A third dose of the same amount was then administered. It was with a full knowledge and appreciation of the fact that atropia was given for the relief of the respiratory centres; but the attendants were also aware that the books, as well as his experience, taught that the action of the heart was also influenced by it. Since the heart was already acting with abnormal rapidity, and the quantity of morphia had been so small, it was feared that any more atropia might further stimulate the cardiac ganglia and paralyze the inhibitory pneumogastric nerve, thus rendering the difficulty more pronounced. All these things were considered, as well as the question asked by one of the speakers, namely, was there nothing else that could produce this condition? After the third dose of a ninety-sixth of a grain had been given, the pupils responded to a slight degree. He was aware that the condition of the pupils was no guide to the effect being produced upon the respiratory or cardiac centres by the atropia, and that, as a rule, the remedy ought to be continued until it showed some effect on the respiration. But in this connection, he felt that it was necessary to take into consideration also the amount of morphia he was endeavoring to counteract. Did the respiratory centre need stimulation on account of the effect of morphia poisoning? Finally, it was decided to give another dose of $\frac{1}{160}$ th of a grain. He had felt that they would not be justified in giving more, lest they might substitute belladonna for opium narcosis, and only further paralyze the centres they desired to relieve. The danger of this, he said, was strongly insisted upon by Bartholow (*Therapeutics*, fifth edition, page 519), where he says, that "Belladonna in too great quantity, or too long inaction, exhausts the irritability of the unstriated muscular fibre, and thus induces the very state which its administration is intended to relieve," etc. This view is also concurred in by other high authorities.

While the amount of atropia that had been administered was not enough to prove at all dangerous to life, there were other things to retain him from giving more. One of these was the possibility, not yet positively eliminated, of the case being one of apoplexy. Still he regarded this at the time as an improbable condition, from the absolute equality in the degree of contraction of the pupils. Then, too, he agreed with the speaker who had remarked that if he had given more, it would have been said that the patient died from bad

therapy, rather than from the effects of opium. He must insist that, sustained by the highest authorities, as well as his own judgment, *he was bound, in determining the quantity of atropia, to consider the quantity of morphia which had been given, as well as the character of the heart's action.*

In regard to the faradic current, attention was called to the fact that it was applied over the course of the phrenic more diligently than to the pneumogastric.

Speaking of the amount of morphia that may prove fatal, the speaker referred to Wood's *Therapeutics*, third edition, page 125, where it is stated that the smallest dose that has proved fatal in the adult was the sixth of a grain, administered hypodermically. In a foot-note on the same page, the statement is made that the literature now presents many similar cases. Although we do not know the nature of the condition we call an idiosyncrasy, he thought it strictly correct to attribute the accident he had reported to such a condition, rather than to state that, because the dose had been so small, it must have been due to some other trouble.

In conclusion, he narrated a case that had occurred in his practice a number of years ago. He was called one evening, just as he was starting to attend an obstetrical case, to see a patient to whom he had been accustomed to administer morphia subcutaneously, in the dose of a quarter of a grain, at intervals of two or three weeks, for the relief of a severe neuralgia. At that time, he was in the habit of keeping his morphia for hypodermic use in a solution which he always had prepared by the same pharmacist, and in the same quantity. When he arrived at the home of the patient, and was about to prepare the usual dose, he discovered that the greater part of his solution had escaped, so that there was not enough to give the usual amount. Being pressed for time, he clandestinely filled the bottle with water, diluting the remaining solution at least ten times. From this, he administered the usual quantity, intending to return in a short time and repeat the administration with a stronger solution. When he returned, about two hours later, he found the patient in a coma, with another physician in attendance, and both were required to remain all night in order to restore her. The woman died suddenly a few years after, and her death was attributed to apoplexy.

RHODE ISLAND MEDICAL SOCIETY.

Semi-Annual Meeting, December 18, 1884.

THE PRESIDENT, DR. OLIVER C. WIGGIN, IN THE CHAIR.

(Specially reported for THE MEDICAL NEWS.)

THE PRESIDENT addressed the Society in behalf of the ESTABLISHMENT OF AN ANATOMICAL MUSEUM,

emphasizing the importance and value of such a collection, and expressing the opinion that there were young men in the Society abundantly qualified to take the initiative steps. He thought it best not to draw upon the funds of the Society for the object in question, but to meet the few incidental expenses from other sources.

Upon motion of Dr. Terry, it was voted that the Chair appoint a committee of five Fellows, to be known as the Museum Committee, with full powers to act.

The Chair constituted the Committee as follows: *Chairman*, Dr. W. J. McCaw; Drs. G. T. Swarts, T. B. Fuller, C. M. Godding, and B. R. Lymonds.

DR. EZRA DYER, of Newport, reported a case of

FISTULA OF THE ANTITRAGUS,

and said this affection was very rare. It is one that causes some annoyance. Properly described, it is not a fistula, but a minute sac situated about a centimetre above the antitragus. His patient was a young lady, fourteen years of age, who was annoyed by the offensive matter exuded from the little sac, which was a centimetre in depth. She had been treated by several New York physicians without benefit. Caustics had been employed, and the sac had been partly slit down, among other procedures. Dr. Dyer armed the point of a curved needle with hard wax, making it probe-pointed, and passed a heavy silk suture through the sac, as a seton. This was allowed to remain ten days, but did no good. Finally, a loop of platinum wire was passed into the sac and brought to a white heat by galvanism. The patient complained of a good deal of pain at the time, and the operator had not seen her since, but had been told by her father that the sac closed up entirely, and without further trouble.

DR. E. W. TENNEY reported a case of

RETAINED PLACENTA.

The woman was thirty-six years old, and had menstruated normally up to eleven months ago. Since that time she had flowed for two or three days, at intervals of two months or more. These hemorrhages, at first, were not very copious, and were painless, but had increased in severity of late. He first saw the case Dec. 10th, and found the patient flowing freely and suffering intensely. Suspecting abortion to be near at hand, she was questioned as to her condition, when she denied that she was pregnant at all, and, upon further inquiry and examination, he decided that probably she was not so. The mammae were soft and flabby, and the uterus little if any enlarged. Digital examination revealed a fleshy mass occluding the os internum, which was then thought to be a pediculated fibroid which the uterus was trying to expel. Morphine was given hypodermically to relieve the pain. The next day the mass was found crowded lower down in the vagina, and was extracted without much difficulty. It proved to be a placenta about two and a half inches in diameter and studded with pea-sized cysts filled with clear fluid. Evidently hydatiform degeneration had occurred.

It was the opinion of the writer that pregnancy began eleven months previous, and that the placenta had been retained that length of time—a very rare occurrence, so far as he could learn.

THE PRESIDENT remarked that he had not supposed such cases were so rare, and mentioned two from his own practice. In the first case the placenta was retained in the uterus for eighteen months, and had become contracted into a round, fibroid mass, and nided, as it were, in a sac on one side of the fundus, making a ball the size of a walnut. Dr. Wiggin introduced his finger and released the round mass from its enveloping sac, leaving it free within the cavity of the womb, from which he did not attempt to remove it. A dose of ergot was given, which was followed, within twenty-four hours, by the expulsion of the placental mass. In the

second case, on delivering a child at full term, he was surprised to find in the uterine cavity an old placenta, which had been retained there since the occurrence of an abortion some time previous to this pregnancy.

DR. D. H. BATCHELDER remarked that he had a patient now under observation who has a retained placenta from an abortion that occurred three months ago; because she refused to have it removed by his method. It was his belief that the advice of some authors to leave the expulsion of the placenta to nature, in cases of abortion, was wrong, and that it should be accomplished without delay. His own method was to introduce a home-made instrument, viz., a piece of large-sized wire bent into the form of a ring. He would turn this, in the uterine cavity, with considerable force, so as completely to break up the placenta, which was sure to be expelled within twenty-four hours without serious hemorrhage or other bad results.

DR. F. B. FULLER then read a paper on

THE NATURE AND PREVENTION OF PUERPERAL FEVER.

The various theories of eminent authorities, as to the nature of the disease, were carefully reviewed. The writer claimed that the connection between zymotic causes and puerperal disease is too close to be overlooked, and, in the way of prevention, it is the physician's duty to see that the most perfect ventilation possible is maintained in the lying-in room. The invasion of the genital tract by germs before labor is to be guarded against by cleanliness and the use of antiseptics. After delivery the firm contraction of the womb is a most important condition in the prevention of puerperal fever. To insure this, pressure over the fundus is to be kept up for some time by the hand and then by a binder, together with the administration of ergot and opium. All lacerations of the perineum should be stitched. The bed should be kept clean and its linen frequently changed. The napkins should also be frequently renewed and disinfectants used.

DR. TERRY remarked that he believed puerperal fever to be of septic origin and nature, and not zymotic at all; even though it may occur before labor, and in waves, as it were. When we have no cases of puerperal fever, we get careless, and doors are left open, inviting septicæmia. He also alluded to the connection between offensive lochia and septicæmia, and said it was a common thing, when he was in the lying-in hospital, for the lochia to be offensive, but that he had seen only four instances of it in his private practice, three of which occurred in one week—just following the case of a patient who died of self-induced abortion and septicæmia. He thought he himself carried the disease germs from this case to the other three.

He also thought we have in milk fever, so called, a mild form of septicæmia. In the lying-in hospital the patient's temperature was very apt to be from 101° to 103° on the third day after confinement, but this is not the case in private practice.

DR. NEWHALL claimed that we possess no certain knowledge of germs as the cause of puerperal disease, and that the question is still unsettled.

DR. TERRY remarked that he supposed no one claimed, as yet, that the germ theory is anything more

than a theory, but it is found that treatment based on that theory is the most successful.

DR. BATCHELDER said that he had attended about three thousand confinements, and had seen only four cases of puerperal fever among the entire number.

DR. FULLER said that he was glad some of the speakers had been fortunate enough to have so few cases of puerperal septicæmia in the long series of cases mentioned, but statistics showed that in New York City during one year, one death out of every one hundred and twenty-seven had been caused by that disease. If we could all live as the primitive man lived, we would need no antiseptics and hear of no puerperal fever. To acknowledge the identity of septicæmia and puerperal fever is not necessarily to accept the germ theory. The existence of septicæmia is undoubted, and hence we should take all possible precautions against it.

DR. CASWELL thought that septicæmia is liable to occur after confinement, when the cervix or perineum has been lacerated and neglected, or when the medical attendant has recently come from a case of erysipelas or septicæmia or a post-mortem, and has not observed the proper rules for cleansing and disinfecting himself. He did not think we were expected to follow *all* the directions set forth by Dr. Thomas, but there was surely a middle ground we could occupy with safety. In ordinary cases he would do away with much that Dr. Thomas has advised, but in times of epidemics or under unfavorable circumstances every precaution should be observed.

DR. ELY also believed a middle course to be the best. Absolute cleanliness is the important element. There was no doubt as to the great value of intrauterine injections in certain cases, but he inclined to the belief that the good accomplished was not so much due to the potency of the fluid injected as a *germ destroyer* as to its effect simply in rinsing and washing out the uterine cavity, and thus freeing it mechanically from decaying matter and germs. Probably the injection of *pure* water would accomplish as much. It certainly is the duty of every physician to free himself from dangerous contamination before approaching a case of parturition.

DR. CHARLES O'LEARY expressed his concurrence in the remarks of Dr. Caswell, and said he believed that too much meddling in midwifery was injurious.

Upon motion of DR. CASWELL it was voted that

THE ANNUAL MEETING

of the Society be held on the *second* Thursday of June instead of the *third* Thursday as heretofore.

DR. CASWELL reported a

CASE OF LITHOLAPAXY.

About two years ago he first operated on the patient, removing a small stone intact, and the fragments of a second one. The cure was complete until symptoms of stone reappeared a few months ago. On December 2d, he operated again with exactly the same result, viz., the removal of a small stone unbroken and the fragments of a slightly larger one which could not enter the tube intact. The recovery of the patient was rapid, he being about the house the following day, and at his place of business on the third day. Dr. Caswell alluded to this illustration of the immense advantage of the crushing over the cutting operation in case of a small calculus.

DR. G. T. SWARTS then read a long and interesting

paper, giving the statistical and other conclusions based on his personal investigation of three hundred out of the five hundred cases of

TYPHOID FEVER

reported to the Superintendent of Health in Providence, during the epidemic of 1882 and 1883. The special object of the investigations had been the causation of the disease.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, December 5, 1884.

(Specially reported for THE MEDICAL NEWS.)

THE PRESIDENT, T. G. RODDICK, M.D., IN THE CHAIR.

THE PRESIDENT exhibited a

TUMOR OF THE BLADDER

about the size of a hen's egg, which he had successfully removed from a patient under his care in the General Hospital. A microscopic slide of the tumor was also presented, which showed that it was a cystic papilloma.

The history of the case is as follows: Patient, aged fifty-three, ten years ago first noticed difficulty of micturition, three years ago passed blood with his urine; at that time he was making water every hour; this was preceded by pain, referred to the end of the penis and neck of the bladder. Since then he has been troubled with frequent and painful micturition, for relief of which he applied for admission to the Hospital. When admitted into the Hospital he was making water every hour, but from a bladder so distended that it reached nearly to the level of the umbilicus. He complained of great pain in the left iliac region, especially during the act of micturition. The prostate, on examination, proved to be only very slightly larger than normal. The bladder was sounded carefully, but nothing definite could be made out. Dr. Roddick, thinking the case was either one of encysted stone or tumor, determined to explore the bladder after the manner recommended by Sir Henry Thompson. This he did on November 12th. A staff was introduced and the perineum incised in the middle line and the urethra opened in the membranous portion; the finger was then introduced through the prostatic urethra, and almost immediately something was felt. On examining more carefully, Dr. Roddick discovered a pedunculated tumor attached to the side of the neck of the bladder; this he freed with his finger-nail and extracted with forceps. For a few days the man had some elevation of temperature, but afterwards he did well, and was, at the present time, passing his urine by the urethra.

Dr. Roddick remarked that he had several times explored the bladder according to Sir Henry Thompson's method, but that this was the first time he had discovered a tumor.

CHICAGO GYNECOLOGICAL SOCIETY.

Stated Meeting, December 19, 1884.

THE PRESIDENT, H. P. MERRIMAN, M.D., IN THE CHAIR.

DR. ETHERIDGE exhibited

A PLACENTA WITH CALCAREOUS DEPOSITS.

The placenta was removed from the body of a woman, pregnant for the first time, who had probably carried

the fœtus two hundred and ninety-two days. The calcareous deposit was probably the result of fatty metamorphosis of the upper layers of the *decidua serotina*.

DR. SAWYER said that the placenta was interesting but not uncommon. It has been erroneously believed that such *placenta* are of syphilitic origin. He thought the connection with prolonged gestation was established.

DR. DUDLEY referred to the calcareous deposit in the walls of the arteries supplying an ovarian cyst which he had removed some years previously.

DR. JACKSON related the history of a case in which he had removed a mass of calcium carbonate, situated in the recto-vaginal septum, an inch and a half from the vulvo-vaginal orifice. There was no fatty metamorphosis in this case.

DR. EARLE thought there was an unreasonable tendency to ascribe such cases to the effects of syphilis. Hydatidiform degeneration of the chorionic villi and hydrops amnii received a similar erroneous etiology.

DR. ETHERIDGE said that the deposits were composed of the phosphate and carbonate of calcium. These salts had an affinity for albumens and fatty acids resident in the cotyledons. Similar calcareous deposits were found in fibroid, thrombi, encysted trichinæ, and in the lithopædia of extrauterine pregnancy.

DR. W. H. BYFORD thought the connection between prolonged gestation and calcareous deposits in the placenta was established. He thought that Dr. Etheridge would find, on microscopic examination, that the changes had occurred exclusively within the vessel walls.

NEWS ITEMS.

NEW YORK.

(From our Special Correspondent.)

DR. WILLIAM DARLING, the eccentric Professor of Anatomy of the University Medical College, died last week of pneumonia. Prof. Darling was a man of profound learning of a limited kind, and his studious habits and retentive memory made him, without doubt, one of the best living anatomists. His room at the college, where he lived, was a perfect Golgotha, and he might have been said to live cheek by jowl with his subjects. He was exceedingly simple and penurious in his habits, and for many years walked several miles to the lower part of the city for his economical, farinaceous meals, which, for great occasions, were supplemented with a piece of meat.

The stories regarding him which have floated about the College are very entertaining, and his avidity for morbid specimens, and anxiety in regard to approaching deaths, was comical. His pathological tastes rather led him to acquire the strange and picturesque than those specimens which were of absolute scientific value. In spite of certain peculiarities, he was an agreeable, quaint old Scotchman.

THE BOARD OF HEALTH are again in trouble, and a committee of "ladies" have prodded them into indicting one Kane, who stores vast quantities of manure on the east side of the city. This board, as well as others, has shown singular incompetence in taking care of the great nuisances of this character, and a remarkable vacillation which is not creditable.

COCAINE IN DENTAL SURGERY.—Cocaine has been used here in dental surgery, and Dr. W. Halsted has, by means of injection of a four per cent. solution (and even one of greater strength) with a curved point caused anæsthesia of the inferior dental nerves. Several operations have been performed without discomfort to the patient, and one dentist has filled teeth quite painlessly.

SCARLET FEVER.—The city is suffering from a rather decided outbreak of a very malignant form of scarlet fever.

OUR WAITING ROOMS.—Your correspondent has been impressed with the cheerlessness of many of the waiting rooms of medical men. While such places are exposed to the incursions of petty sneak-thieves, still it is possible to make them much more attractive than they now are by means of pictures and books. Illustrated and other papers several weeks old are scarcely profitable reading, and patent medicine circulars, illustrated catalogues, and such literary rubbish are scarcely calculated to engage the impatient patient. In one ante-room we found last week a large bible, bearing the imprint of the American Tract Society, was the only pabulum. When one stops to think of the diverse character of his patients, he will be a little more liberal in his provision of reading material.

CINCINNATI.

(From our Special Correspondent.)

MORTALITY STATISTICS.—It has always been the pride of our unprofessional Board of Health to report a lower rate of mortality at the close of each week than was reported for the corresponding week of several preceding years. The exceptionally healthy condition of the city during the last year has enabled them to accomplish this end without difficulty. But with the coming of winter the rate of mortality has very decidedly increased, so that the reports are less pleasing and, as the Board seems to think, less creditable to it than they have been for several years. In order at least partially to overcome this state of affairs, and to guard against its occurrence in the future, the Health Officer has addressed a communication to the Board, in which he recommends that the average hereafter be reckoned on a higher basis of population. Since the 1st of January, 1877, the rate of mortality has been computed upon an assumed population of 280,000. On the assumption of the Health Officer that *six* is the ratio of vote to population, the recent election would indicate that the population of Cincinnati is 353,100, or 73,100 more than the present estimate. Although the ratio six appears rather high, we are told that it is lower than the estimate made in Chicago or Cleveland. The officer very modestly recommends that on and after the 1st of January, 1885, the population, so far as the Board of Health is concerned, be considered not less than 325,000.

The report for the week ending Saturday, December 6th, indicates a total of 123 deaths, or a rate of 22.91 per annum per thousand. Deaths during the week ending December 8, 1883, 100; during the week ending December 9, 1882, 109.

YELLOW FEVER IN HAVANA.—For the week ending December 11th, Dr. D. M. Burgess, Sanitary Inspector,

Marine-Hospital Service, reports only three deaths from yellow fever in Havana.

PROPHYLACTIC MEASURES AGAINST CHOLERA IN PARIS.—THE Préfecture de Police has issued the following rules, to be observed in case of an outbreak of cholera in Paris. They relate: 1, to the precautions to be taken against cholera, preventive measures, care and isolation of the patients, and disinfection; 2, to persons who have come in contact with choleraics; 3, to the certificate of death and proper burial of the dead body.

Notification. When a case of apparent cholera has come to the knowledge of a magistrate, either by communication of the physician in attendance, of the police, or by public rumor, the magistrate shall cause a special physician to see the case immediately and make a report, which shall be sent to the Chief of Police as soon as possible.

Special Physicians. In each quarter of the city, and in each ward, one or more physicians should be appointed to visit the sick persons at the first order of the administration. These physicians shall visit every case which is suspected to be cholera. They shall go to the house in which the patient is, make the diagnosis, and make out a report which must be sent to the police magistrate.

Transportation of Patients. Special vehicles have been made for the transportation of patients with choleraic affections, who cannot be cared for at home. Independently of these vehicles, others have been set apart to be used in cases of necessity. When a patient has to be carried to the hospital, the request must be made by the family to the police magistrate or to the police post of the quarter, from which place the name and address of the patient shall be telegraphed to the Chief of Police. The Chief of Police shall immediately send the ambulance, to which the horses shall be always hitched. After the transportation, the ambulance shall be washed and thoroughly disinfected. These ambulances shall be at the disposal of the public at all times, free of charge. The citizens should be advised of the existence of these special ambulances through the newspapers.

Disinfection of Contaminated Places. Disinfectants shall be furnished to the public free of charge, at all police stations; and to insure the proper execution of the prescribed measures, a special service of disinfectors has been created. These agents will immediately disinfect every place contaminated by a choleraic, either after the decease or after removal of the patient to the hospital. The disinfection is done by two persons, who shall always be ready to set out at the first call. The orders to them shall be sent by telephone. The *personnel* and the disinfecting materials are to be carried in a vehicle, which must always be ready. The number of disinfecting agents may be increased when necessary. The men shall be of age, and shall be of good moral character. The physician in charge will see that the disinfection is properly carried out.

The Burial. The police magistrates shall, as soon as possible, inform the mayor of all persons dead of cholera, so that he may at once order the burial. Special measures are to be taken that the coffins are absolutely impermeable.

Medical Service. The Mayor has been asked to organize a special Medical Service, so that families may be sure of finding physicians at certain places at any hour of the day or night.

The Chief of Police will see that ovens for the disinfection of clothing, bedding, etc., are constructed at certain places; and they shall be so made that dry or moist heat may be used, as necessary. The following are the instructions for the squads of disinfectors;

I. When a disinfecting squad is called to a room which has recently been occupied by a sick person, it shall go immediately, carrying the following articles: 1. An iron plate, two feet in diameter. 2. A bag of sand. 3. Flowers of sulphur, in packages of lb. $1\frac{1}{4}$ each. 4. Alcohol in six ounce flasks. 5. A clay furnace, or some bricks. 6. Matches. 7. Small kindling wood. 8. A metre (yard) measure. 9. A step-ladder, six feet high. 10. A pot of glue, and a brush. 11. Some paper (as newspapers). 12. Bottles of chloride of zinc.

II. Having arrived at the house, the room to be disinfected is first measured; the height being multiplied by the length, and the product by the breadth. This measure shows what quantity of sulphur is necessary for disinfecting it, 3v being used for each cubic yard. A room of twenty-five cubic yards requires lb. $1\frac{1}{4}$ of sulphur, or one package.

Everything which has come in contact with the cholera patient should be spread on the floor, or on tables. The chimney, windows, doors, and every chink leading out of the room should be closely stopped by pasting paper over them. The furnace (or the bricks) is placed on the iron plate in the middle of the room, every precaution being taken against accident from fire, papers and inflammable material being removed from it. If a furnace is not to be had, a temporary one may be made with some bricks and sand. Into this the necessary quantity of sulphur is poured; some alcohol poured on the sulphur, so as to moisten its surface; a few bits of the kindling wood placed on, and the fire lighted. The process is similar with a furnace.

The remaining open door is then closed, and the chinks stopped from the outside; the key is given to the janitor, with instructions that no one shall enter the room. Before leaving the house, all water-closets and sinks should be disinfected with a solution of lb. $1\frac{1}{4}$ of chloride of zinc in ten quarts of water.

III. The house is to be visited on the next day, the water-closets and sinks again disinfected with the solution of chloride of zinc, the doors and windows opened, and a report made to the Chief of Police.

To complete the system of notification, the telephone companies are required to place their instruments and lines at the service of the public. Every person having a physician's certificate, showing that he wishes to use the instrument on cholera business, will have this privilege accorded him.

On November 10th, the Municipal Council of Paris voted the sum of 150,000 francs to organize the cholera service.—*Gazette Méd. de Paris*, Nov. 15, 1884.

OBITUARY RECORD.—WILLIAM DARLING, M.D., F.R.C.S., Professor of Anatomy in the Medical Department of the University of the City of New York,

died in New York on Wednesday, December 24th. Dr. Darling was born in Berwickshire, Scotland, in 1815. He came to America in 1830, and in 1841 he began the study of medicine in the University in which he subsequently became a distinguished professor. In 1840 he was appointed Assistant Physician to Bellevue Hospital, and while acting as such had charge of the male and female hospitals, and of the Smallpox Hospital on Blackwell's Island. In 1845 he was appointed Demonstrator of Anatomy by Prof. Granville Sharp Pattison, which position he held until the death of Dr. Pattison, when he became Acting Professor. In 1856 he went to London, and was admitted a member of the Royal College of Surgeons. He remained abroad for ten years, most of the time in London, attending the lectures and clinics at the various hospitals. In 1866 he was appointed Professor of Anatomy in the Medical Department of the University of the City of New York, and before leaving London he obtained his Fellowship in the Royal College of Surgeons. In 1873 he was appointed Professor of Anatomy in the University of Vermont, and in 1877 he was elected Foreign Correspondent of the Société d'Anthropologie of Paris.

Dr. Darling was not a dry teacher of anatomical facts, but, having a thorough knowledge of ancient and modern classic writings, he used them in the lecture-room with great interest and benefit to the student. He was an enthusiastic collector of anatomical specimens, and had probably the best osteological museum in the country, if not in the world.

—AUGUSTUS VAN CORTLAND, M.D., one of the oldest physicians in Westchester County, N. Y., died at Mount Vernon, on Tuesday, December, 23d, at the age of fifty-eight years. He was a surgeon in the Union Army during the late Civil War.

—A despatch from Berlin says that DR. GRIMM, the Body Physician of Emperor William, is dead. He was the originator of the sanitary system adopted by the German military authorities.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 23 TO DECEMBER 29, 1884.

MCPARLIN, THOMAS A., *Lieutenant-Colonel and Assistant Medical Purveyor*.—Granted leave of absence for three months, on surgeon's certificate of disability.—*S. O. 301, A. G. O., December 24, 1884.*

JOHNSON, HENRY, *Captain and Medical Storekeeper*.—Directed, in addition to his present duties, to perform the duties of Assistant Medical Purveyor in New York City.—*S. O. 301, A. G. O., December 24, 1884.*

WALES, P. G., *First Lieutenant and Assistant Surgeon*.—Relieved from duty in Department of Colorado, and ordered to Department of Arizona.—*S. O. 128, Division of the Pacific, December 27, 1884.*

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.